DISARMAMENT

A periodic review by the United Nations

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Ballistic Missile Defences: Developments and Security Implications

Limited ABM: A Wrong Solution for the Real Problem

Alexei G. Arbatov

In 1990 and 1991, the Strategic Defense Initiative (SDI), which had been initially designed as a revolutionary breakthrough in doctrines of the nuclear age, has been squeezed into the traditional framework of "nuclear deterrence" strategy. Even in this role, SDI has become just a peripheral appendage to security arrangements.

In particular, the new version of the anti-missile system known as Global Protection Against Limited Strikes or GPALS, advanced by the United States Department of Defense in the aftermath of the Persian Gulf war, envisages defence only against limited, accidental, unauthorized missile launches and missile attacks by third world countries. The more modest technical scale and less ambitious strategic vision of the current anti-ballistic missile (ABM) version create the appearance of a more realistic policy and a more rational programme. As distinct from President Reagan's "great dream" of the past, contemporary "SDI" is becoming a subject of more specific debates and technical estimates and forecasts.

This means that it may be implemented. But the GPALS system will materialize only if strategic debates in

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the United States, budgetary considerations, follow-on negotiations on stability in Geneva and the overall situation in the USSR are conducive to implementing it.

Although technically still very vague, the GPALS concept envisions deployment of about 1,000 space-based kinetic, direct-impact infrared homing interceptors of the "brilliant pebbles" type, supported by 700-1,000 high-altitude ground-based missile interceptors with non-nuclear warheads. The former are to receive tracking information from the future "brilliant eyes" electronic-optical satellites, while the latter are to be guided by ground-based radars and homing systems. In addition, development of an anti-theatre ballistic missile (ATBM) system is continuing as a follow-up to the veteran Patriot, which was used in the Gulf war to intercept Iraqi Scud missiles. The new United States ATBM has to be transportable to any place in the world to defend United States troops and allies. The whole research and development, procurement and deployment programme might take from 10 to 15 years and require around $50 billion in addition to the $20 billion already spent on SDI.[1]

In July 1991, the United States Senate approved the allocation of $4.6 billion for deployment of the first ABM base in North Dakota (which is not in violation of the 1972 ABM Treaty) and for the continued development of other elements of GPALS. Simultaneously, it was decided to start talks with the Soviets on amending the Treaty to allow for later deployment of additional ground-based ABM sites (1,000-2,000 interceptors) and space-based sensors.

At first glance, internal instabilities in the Soviet Union and the proliferation of ballistic missiles in the third world make the new ABM version politically plausible. Closer examination reveals, however, serious flaws in this new SDI concept.

In principle, the probability of an unauthorized or accidental launch of a ballistic missile is very low and is

diminishing. The command and communications systems of nuclear forces, which protect them against unauthorized or accidental use, are being improved. Special procedures and mechanical and electronic blocking devices are being enhanced in order to reduce as much as possible the danger of unauthorized launch.

On the other hand, this possibility should not be totally ruled out. The question is whether an ABM system is capable of rectifying the situation. Limited anti-missile systems permitted by the ABM Treaty can protect only limited areas. For these ABM systems to prove their worth, a missile launched in an unauthorized or accidental way would have to be targeted exactly on these areas, and that possibility is too negligible to take into account.

The building of a "thin" ABM system for the protection of a State's entire territory, the deployment of space-based interception systems, might create greater problems than those it is intended to solve.

The extension of at least a "thin" defence to the entire territory would require major amendment of the ABM Treaty. This would involve serious political and legal difficulties. Another point to keep in mind is that, for some influential groups and institutions in both countries, the amendment would be just a pretext to completely dismantle the Treaty and proceed with unlimited deployment of defence and space systems.

The problems that stem from the asymmetry of the two countries' strategic offensive forces and that have complicated the Strategic Arms Reduction Treaty (START) would grow in geometric progression should disproportions in their respective ABM systems become an issue at the Geneva negotiations.

Owing to differences in technical characteristics and standards, it would be extremely difficult to ensure equality of the two sides—all the more so in that non-nuclear

defence will make differences in technologies much more important.

Moreover, the location of ground-based anti-missile sites in relation to strategic offensive deployment areas and the administrative and industrial centres of the two countries must be quite different.

Anti-missile protection of United States allies would be another problem, extremely divisive in view of their differences in strategic vulnerability, economic and technical levels, and political significance of command and control arrangements. Space-based ABM interceptors would avoid many of those asymmetries. If technically feasible, a "brilliant pebbles"–type system would be able to intercept any ballistic missile above a certain altitude, regardless of its launch point or target location on the globe. But it would create other, no less serious problems between the United States and the USSR involving space technology differences between the two States, variations in suitable orbits, mutual vulnerabilities of space-based interceptors and their sensors and communications links, and risks of break-out of space-based anti-missile weapons—even if limited by agreements.

Extension of the range of ground-based interceptors or construction of deployment sites (in addition to the one permitted under the ABM Treaty) would require the solution of many technical problems, especially for the Soviet Union in the light of its geography. What would be sufficient to cover United States territory would not suffice for that of the Soviet Union, which extends many thousands of kilometres beyond the Urals. To protect it, at least a dozen additional deployment areas would be required, depending on the range of the anti-missile interceptors, their acceleration and kill capabilities—an addition that would give rise to concerns regarding United States–Soviet asymmetries and possible break-out.

While the United States might want to emphasize space-based elements of the ABM system, suitable for its own protection and that of its allies, the USSR, for geostrategic and technical reasons, might prefer land-based options. If it is not successful in developing sophisticated non-nuclear interceptors, Moscow would feel entitled to deploy traditional nuclear types. How would United States allies react to this programme? How would thousands of extended-range nuclear anti-missile interceptors affect the limits imposed by the Treaty on intermediate-range and shorter-range missiles (INF) and by START?

The United States space-based interceptors would inherently possess anti-satellite capability against Soviet space assets. To balance this, Moscow might decide to deploy its own dedicated anti-satellite (ASAT) system, either land- or space-based, or both.

Americans would not need operational deployment of transportable ATBM defences on their territory in the absence of any obvious threat close by. The Soviet side would certainly choose to deploy ATBM systems in combat-ready forces to face threats from all directions and would acquire a non-dedicated strategic terminal defence layer, in particular against slower re-entering warheads on submarine-launched ballistic missiles (SLBMs). In and of itself this might not be of great strategic importance, but in combination with other defensive deployments, it would cause substantial concern.

The United States can afford to discount an air-delivered nuclear (or chemical) strike by a third world country or terrorists. In the Soviet Union, this contingency would certainly be taken seriously, jointly with the United States, if the threat of limited attack were elevated to the highest defence priority. ABM and ATBM expansion would be senseless for the USSR without further improvements in its massive air-defence. For a number of technical reasons, the latter would be extremely hard to limit to a third world

threat, without affecting the United States–Soviet strategic or the Western–Soviet theatre nuclear balance. These and many other—as yet unpredictable—complications are in store if the ABM problem is reopened on the practical level.

The United States interest in defence against accidental launch is, to a large extent, motivated or justified by the possibility of a break-up of control over the Soviet nuclear arsenal as a result of the internal crisis in the Soviet Union. An ABM system would hardly provide a solution under such circumstances. At present, intercontinental ballistic missiles (ICBMs) and SLBMs are the least susceptible to unauthorized launch for purely technical reasons. In any case, strategic offensive weapons should be deployed only on Russian territory and the reductions under START may allow this to be done rationally and quickly. Tactical nuclear weapons pose problems that an ABM system cannot address. Other methods of ensuring tight control over nuclear weapons are, however, available.

Moreover, the time required for the development and deployment of GPALS does not correlate with the time required to settle Soviet domestic troubles—which will be sorted out in one way or the other in the next several years. Depending on the resolution of the current crisis, a United States ABM system against unauthorized launch, developed in response to Soviet domestic calamities, will be either insufficient or unnecessary.

The "normal" theoretical probability of unauthorized or accidental launches, inherent in the existence of vast strategic arsenals, especially in crisis situations, is aggravated by the concepts of launch-on-warning (LOW) or launch-under-attack (LUA). The principle of launching strategic forces upon receiving signals from early warning systems, without waiting until the strike is delivered on the targets, are justified by the vulnerability of a part of one's strategic offensive forces and their command and commu-

nications systems to a nuclear strike. The short flight time of sea- and land-based ballistic missiles (10 to 30 minutes) reduces the reaction time to a few minutes. This fact suggests almost preprogrammed decisions and actions, the transfer of nuclear forces to the highest state of alert, and removal and deactivation of most of the preventive systems. All this considerably increases the danger of an unauthorized or accidental launch.

The START talks may help if, in an effort to reduce strategic armaments, the two parties ensure greater survivability of the remaining strategic offensive forces and of their warning, command and communications systems. These goals may also be attained through dispersal of the remaining forces at highly survivable launchers and platforms and through reductions and limitations on weapons systems of higher counter-force capability. These measures would reduce (and in the new political situation even eliminate) the dependence of the two States on the concepts of LOW and LUA.

Of great importance are also further developments in strategic confidence-building measures (such as notifications about missile launches, above-normal patrol rates of strategic and attack submarines, and massive take-offs of bombers) and the modernization of direct communication lines and nuclear risk reduction centres.

It is possible to visualize in the future direct talks on this problem, the development of reliable joint early warning systems, the permanent monitoring by one side's inspectors of the other side's strategic bases and command centres on a mutual basis, the common development of preventive and blocking devices, and controlled installations of self-destruct mechanisms on missiles. These measures are becoming thinkable in the new political situation after August 1991, and they would provide much better solutions to the problem, as compared with the deployment of GPALS-type systems.

On the contrary, deployment of defensive systems in parallel with reductions in offensive weapons might encourage greater reliance on LOW. This will be more likely if offensive systems become less survivable. Survivability is expensive, and the necessary resources might be consumed by new defences.

The defence against terrorist nuclear missile strikes deserves special attention. Clearly there is the danger of the continuing transfer of ballistic missiles and ballistic missile technologies to third world countries. In addition, unstable, adventurist and fanatical regimes or terrorist groups may get access to nuclear (chemical or biological) munitions and mate them with ballistic missiles.

Within the framework of the limited systems that are at present permitted under the ABM Treaty, it is practically impossible to defend either of the two super-Powers from a terrorist strike. The extension of at least a "thin" defence to the entire territory would require revision of the Treaty. As in the case of acquisition of ABM systems against accidental launches, these measures would involve serious political and legal problems.

Moreover, even if "thin" ABM systems did not destabilize United States–Soviet strategic deterrence, their effect upon the other nuclear Powers would be substantial. The United Kingdom, France and China would very likely perceive development of these systems by the super-Powers as detrimental to their security for at least two reasons: new defensive capabilities would detract from their limited deterrent potentials and would never give them comparable protection. These States, having once acquired nuclear weapons at great economic cost for security and status, would not agree to lose this investment as a by-product of United States–Soviet manoeuvring over defence and space issues. The expansion of the super-Powers' ABM systems would only spur the other nuclear-weapon States to build up and improve their nuclear potentials and to unite their

military efforts, which would make their participation in the nuclear-arms control process more difficult.

This reaction is manifest even in respect to the limited United States and Soviet ABM systems that are now permitted by the Treaty for protection of the capital or one area of ICBM deployment. The nuclear force levels of the United Kingdom and France and their present modernization programmes have in large measure been determined (or at any rate justified) by the need to overcome the existing ABM system around Moscow and, in the long run, by the need to counter possible larger-scale ABM deployments.

In the case of additional United States and Soviet defensive efforts, further expansion and modernization of the French and British nuclear deterrent forces and possible steps towards closer cooperation would very soon raise the question of German participation. This issue would be extremely divisive for Western Europe, the North Atlantic Treaty Organization and Western-Soviet relations as a whole.

Chinese reaction (because of its non-aligned status) would be even more negative, although largely unpredictable in practice. For instance, China could opt for larger ICBM and SLBM forces and hair-trigger launch systems, nuclear anti-satellite systems, long-range sea-, air-, or land-based cruise missiles, etc. Beijing's position on ballistic missile proliferation in the third world might become less cooperative, either tacitly or openly.

Reaction of the third world regimes is hardly predictable. If seen as a major step towards super-Power condominium and a sign of their greater willingness to use force either jointly or unilaterally, the United States–Soviet defensive efforts might bring about results just the opposite of those intended: growing cooperation in missile development, proliferating transfers and trade in missile technology, and further nuclear and chemical proliferation.

Lastly, it should be borne in mind that even if effective GPALS-type systems are developed, adventurist regimes or terrorists might use other ways of delivering nuclear munitions, should they acquire them. Generally speaking, of all possible delivery vehicles, a long-range ballistic missile is the most complicated and unsuitable option for them. Organizing the production of even one such vehicle requires the establishment of whole branches of machine-building and chemical and electronic industries, the construction of launching sites, the training of service personnel, etc. This activity would be noticed in good time and the missiles and the infrastructure connected with them would be extremely vulnerable even to conventional weapons.

In all probability, in this field as in many others, ABM defence would create additional difficulties rather than solve problems. During four decades, the two super-Powers have learned the hard way in their bilateral relations that in the nuclear age there is no neat and final technical solution to the problems of national security. Probably the time has come to recognize the same truth in the relations of the two great Powers with the rest of the world. The great Powers, in countering possible threats, should rely much more on a sophisticated combination of their potentials of devastating nuclear retaliation and conventional preemption and of various political and economic "sticks and carrots" for preventing the proliferation of weapons of mass destruction and missile technologies.

To summarize the above considerations, the new version of SDI embodied in the GPALS system does refer to real problems: the danger of an unauthorized missile launch and the threat of ballistic missile proliferation in the third world. But on the other hand, there is yet no evidence that these threats have become the first priority of the defence agenda or that there are no other, more effective ways of dealing with them.

It seems that economic, political and technical impediments to SDI progress gave birth to new strategic justifications for a more limited version of the programme. Being virtually a system in search of a mission, anti-missile defence may paradoxically bring about materialization of the threat that it is supposed to remove. Besides, the technical solution proposed may create significant new complications, reopen older issues and turn out to be ineffective in achieving stated goals.

At the same time, in the light of the experience of the Gulf war, an ATBM system might be useful for the United States and the USSR, if not against each other, then for probable future third world contingencies. Besides, in Europe and in the Far East it would support force restructuring and reduction to implement the principles of defensive sufficiency.

The problem for the negotiators in Geneva in the near future should be to make sure that the development, testing and deployment of ATBM systems do not undermine the ABM Treaty.

For instance, it would be expedient to define testing "in an ABM mode", in addition to the provisions of the Agreed Statement of 1978, as testing against real targets with re-entry speed in excess of 4 km/sec or intercepts at the altitudes higher than 40 km. To make the limitations even more stringent, qualitative limits are also suggested: burnout missile-interceptor speed no higher than 2 km/sec or an acceleration capability in excess of 100 G. The potential of the radars might also be limited, using the ABM Treaty precedent, for instance at 50,000 watt-metres-squared.[2] Geographical limits could help to ensure that ATBMs are not deployed in the northern areas of the two States, where they are not really needed because of an absence of theatre ballistic missile threat. Additional verification and cooperative procedures would by required to establish these limitations.

It is just as clear that space-based interception systems would not be required against theatre missiles since most of them have an apogee below the effective interception altitude of "brilliant pebbles"-type systems or could be fixed to fly lower with the sacrifice of a shorter range.[3]

Contrary to justification for GPALS and the Senate's decision taken in the summer of 1991, it seems that, in view of the changing political and strategic environment, United States–Soviet strategic stability now more than ever requires preservation of the ABM Treaty as it was signed in 1972 and supplemented in 1974 and 1985. At the same time, it will be necessary, in order to remove mutual suspicions, to agree on limits on the experiments permitted or forbidden by the ABM Treaty in reference to ATBM technologies, space-based radar stations and space sensors based on new physical principles. Proceeding from such a mutual understanding it would be expedient to expand transparency, predictability and confidence-building measures related to the activities in the field of ABM defence.

Notes

1 Paper by Representative Les Aspin (Democrat), Chairman, House Armed Services Committee. "Missile Defence and the ABM Treaty: Moving toward a Consensus", presented at the American Defense Preparedness Association, Crystal Gateway Marriott Hotel, 27 June 1991.

2 D. L. Hafner and J. Roper, eds., *ATBMs and Western Security* (Cambridge, Mass., Balinger, 1988), pp. 192-195.

3 T. A. Postol, "Lessons for SDI from the Gulf War Patriot Experience: A Technical Perspective", testimony before the House Armed Services Committee, 16 April 1991.

Limited Defences under a Modified ABM Treaty

William S. Cohen

President Bush's September initiative (see Documentation section) to de-emphasize nuclear weapons in United States security policy fanned hopes that the two super-Powers would institute deep reductions not only in tactical nuclear weapons—the category on which President Bush's unilateral cuts focused—but in their strategic nuclear arsenals as well.

President Gorbachev responded by both matching the announced United States unilateral cuts in tactical nuclear weapons and indicating that the Soviet post-START (Strategic Arms Reduction Treaty) strategic arsenal would contain 5,000 accountable warheads, rather than the 6,000 allowed by the Treaty. Moreover, he proposed that the two sides negotiate additional reductions in strategic warheads down to approximately half the START-permitted levels. As with President Bush's proposal to eliminate multiple warhead land-based missiles, however, President Gorbachev's proposal will have to be negotiated to assure each side that vital security interests are not compromised. Such assurance, though, will be elusive so long as the future of strategic defences remains unresolved, since deep cuts in offensive forces could be a destabilizing complement to large-scale defences, which the Bush Ad-

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ministration continues to advance as a goal in the United States–Soviet negotiations in Geneva. The Administration's actual policy, however, like that of its predecessor, has evolved away from its declared position. While nominally clinging to the ultimate goal of rendering nuclear-armed ballistic missiles impotent and obsolete, the Reagan Administration set forth a "Phase I" plan for space-based and ground-based interceptors and associated sensors capable of intercepting a significant portion of the Soviet ballistic missile force. In his January 1991 State of the Union address, President Bush directed that United States strategic defence efforts be refocused on "providing protection from limited ballistic missile strikes, whatever their source". While the Phase I proposal nominally remains a "requirement" of the Joint Chiefs of Staff, the so-called Global Protection Against Limited Strikes (GPALS) system proposed by the Pentagon in response to President Bush's directive would have far more limited capabilities. Of a size to defeat an attack of up to 200 re-entry vehicles, the announced GPALS system would have approximately 1,000 space-based interceptors and 750 ground-based interceptors located at about 6 sites, as well as space- and ground-based sensors.

While GPALS represented an important truncation of United States objectives for strategic defence, it did not lessen debate in the United States over the proper role of strategic defence (especially space-based interceptors) or opposition from Soviet officials and analysts (see the accompanying article by Alexei Arbatov). Moreover, questions about ultimate United States objectives are accentuated by the fact the Administration's official position in the Defense and Space Talks continues to be that either party should be able, on three-and-one-half years' notice, to deploy missile defences without restriction.

United States Policy: From GPALS to Limited Defence

Notwithstanding declared policy, however, President Bush's September initiative marked another step in the evolution of his position on strategic defence. While his call for "immediate concrete steps to permit the limited deployment of non-nuclear defences to protect against limited ballistic missiles—whatever their source" was similar to earlier statements of support for GPALS, it was made in a dramatically altered international and domestic context. During the eight months between the introduction of GPALS and the September initiative, Iraqi missile attacks were successfully countered by active defences; the Soviet Union was rocked by revolutionary changes, which generated a new spirit of cooperation with the United States; United Nations inspectors discovered that Iraq's nuclear and missile programme were far more advanced than had been suspected; and the United States Senate overwhelmingly adopted a new approach to strategic defence that directly addresses the requirements of the new international situation.

The impact of the Senate's plan on United States policy stems not only from the fact that it originated in Oval Office meetings between Senators and the President, but also from the Senate's powerful role in the making of treaties. Often thought of only in terms of approving or amending treaties after they are negotiated by the Executive, the Senate's treaty-making powers also extend to directing the initiation of and defining the objectives of treaty negotiations. History is replete with examples of the Senate exercising such powers. In the area of arms control, the environmental modification Convention is a notable example of a treaty for which the Senate took the initiative on the United States side. In early 1983, a "build-down" proposal linking strategic nuclear reductions to modernization was crafted in the Senate and later that year was

tabled by the United States in the Strategic Arms Reduction Talks. More recently, the 1984 resumption of bilateral United States–Soviet talks that led to the 1990 Agreement on Destruction and Non-Production of Chemical Weapons was the direct result of a Senate initiative that coupled a bipartisan resolution with a credible threat to halt the binary chemical modernization programme if talks were not resumed.

Perhaps the most important point to note about the Senate's approach to strategic defence is that it is not synonymous with GPALS, especially with regard to space-based interceptors—the GPALS element often considered most critical by GPALS advocates and detractors alike. With numerous commentators in the United States failing to grasp this essential fact, it is understandable that *Krasnaya Zvezda* and *Izvestiya* have failed to do so as well.

The Senate set forth the goal of deploying an anti-ballistic missile system, including one or an adequate additional number of ABM sites and space-based sensors, capable of providing a highly effective defence of the United States against limited attacks of ballistic missiles while maintaining strategic stability, and providing highly effective theatre missile defences (TMD) to United States armed forces and allies.

Initially, the limited defence system would consist of a single anti-ballistic missile (ABM) site with 100 ground-based interceptors, fixed ground-based ABM radar, and optimal utilization of space-based sensors that are not capable of substituting for ABM radars. The Senate unambiguously directed that this initial plan, including the use of space-based sensors, strictly adhere to the ABM Treaty.

The Senate also set forth a new negotiating strategy to reach agreements with the Soviet Union necessary to permit:

Additional ABM sites and ground-based interceptors;

Increased use of space-based sensors for direct battle management;

Increased flexibility for technology development of advanced ballistic missile defences;

Clarification of what constitutes permissible development and testing related to space-based missile defences;

Clarification of the distinction between TMDs and ABM defences, including interceptors and radars.

The first two negotiating objectives would require amendments to the provisions of the ABM Treaty, while the third might. The progress of technology requires that the last two subjects be addressed in any event, although the decisions the two sides make will be influenced by the negotiations on the first three points.

Deployment of more ground-based interceptors at additional ABM sites and space-based sensors capable of battle management are intended to be done in accord with negotiated ABM Treaty amendments defining what new activities would be permitted. Such amendments would define, for example, quantitative limits on deployments and their geographical distribution. While the Pentagon's GPALS proposal presumes the need for approximately four ABM sites to cover the contiguous United States, as well as one site each for Alaska and Hawaii, the Senate did not prejudge the outcome of these negotiations.

Amending the ABM Treaty

Some have questioned whether mutually acceptable quantitative limits for limited defence systems can be successfully negotiated, given the fact that the United States has less than half the land area of the Soviet republics. If the objective of a limited defence system were to provide highly effective protection for every square centimetre of territory, this concern would have merit. However, an analysis of the geographical distribution of population, the

principal value such systems are intended to defend, reveals far less of a disparity. One recent analysis concludes that equal quantitative limits could provide the two sides with roughly equal population protection.[1] Deployment constraints, however, need not be perfectly symmetric, and negotiations could seek to accommodate each side's unique characteristics and circumstances.

Another concern raised is whether a limited defence system is inherently inconsistent with the objectives of the ABM Treaty, in which case negotiations to amend the Treaty to allow such a system will inevitably fail and, in the process, generate tensions between the two sides. In the introductory article of the Treaty, each side "undertakes not to deploy ABM systems for a defense of the territory of its country" and subsequent articles place strict limitations on the development, testing, and deployment of ABM systems and components. The Treaty, of course, does not prohibit ABM defences but regulates them in order to curb "the race in strategic offensive arms and would lead to a decrease in the risk of outbreak of war involving nuclear weapons", according to the Treaty's preamble. The Treaty accomplishes this by ensuring that ABM defences do not threaten the strategic retaliatory capability of either side.

In considering the compatibility of limited defence systems with the ABM Treaty's fundamental objectives, it is important to note that when the Treaty was negotiated, the two sides considered whether to place range limitations on the ABM interceptors that could be deployed under the Treaty. They deliberately chose not to set such range limitations and, in article VII, authorized modernization and replacement of interceptors and other ABM components.

Absent range limitations, the interceptor deployments permitted by the ABM Treaty could provide each side a degree of protection for most of its territory from a limited attack by the other. Indeed, interceptors currently

being developed by the United States could be deployed, consistent with the ABM Treaty, at the abandoned Grand Forks ABM site to protect almost the entire contiguous United States from small-scale Soviet intercontinental ballistic missile (ICBM) attacks with a moderate degree of confidence. (This, in fact, is the initial deployment plan recently endorsed by the Senate.) Under the terms of the original Treaty, which permitted two ABM sites, each with 100 interceptors, the confidence level would be significantly higher.[2]

The issue is not whether ABM interceptors, whose individual or collective footprint (the zone to which they provide protection) is continental in scope, are compatible with the Treaty's objectives. Instead, the principal issue is at what level of deployment would limited ABM systems begin to threaten the credibility of strategic retaliatory capabilities under situations in which the retaliating offensive force is severely stressed.

The scope of the limited defence system was defined by the Senate as "providing a highly effective defense of the U.S. against limited ballistic missile threats, including accidental or unauthorized launches or Third World attacks, *but below a threshold that would bring into question strategic stability*". Significantly, in his September initiative, President Bush adopted this criteria that limited defences should be deployed "without undermining the credibility of existing deterrent forces", which had not been a part of earlier policy statements on the GPALS plan.

The outer bound of the proposed limited defence system's capability is understood to be that intended for the GPALS proposal, that is, the ability to intercept up to 200 re-entry vehicles with very high confidence. By its nature, such a system would also possess a capability to engage a larger number of re-entry vehicles with a lesser degree of confidence. Quantitative, geographical and other constraints, however, could effectively prevent such

a system from approaching the threshold at which it would threaten retaliatory capabilities.

One key issue to be addressed in negotiations is whether space-based interceptors would be permitted, since they play an important role in determining the degree of protection a limited defensive system can provide against larger attacks. Unlike GPALS, the Senate did not conclude that a limited defence system would include space-based interceptors. Equally important, President Bush's September initiative raises the possibility of significant new United States flexibility on this issue.

MIRVed ICBMs and Space-based Interceptors

In his September initiative, President Bush proposed that the American and Soviet Governments negotiate a timetable for the mutual elimination of ICBMs having multiple, independently targetable re-entry vehicles (MIRVs). The United States view of MIRVed ICBMs as being the most destabilizing strategic offensive weapons system has significant implications for United States policy on strategic defence, particularly concepts for space-based interceptors, which would be designed to attack ballistic missiles in the boost phase.

One motive to deploy space-based interceptors is that ballistic missiles are particularly vulnerable to lethal damage in the boost phase. More importantly, however, is the fact that intercepting a MIRVed ballistic missile during the boost phase allows the destruction of many re-entry vehicles at one time with a single interceptor. Once a MIRVed missile releases its many re-entry vehicles, the task of the defender becomes enormously more complicated. The number of objects to be attacked is significantly increased, and the release of penetration aids along with re-entry vehicles can further multiply this challenge immensely. Moreover, the actual task of attack becomes much more difficult since a re-entry vehicle has a signature

that is orders of magnitude smaller than a boost-phase missile. In addition, it is more difficult to determine that a re-entry vehicle has been successfully attacked, and therefore no longer requires attention and possible further attack, than is the case for a boosting missile.

In short, the existence of MIRVed ballistic missiles constitutes one of the strongest arguments in favor of space-based interceptors designed to attack in the boost phase. If agreement could be reached to eliminate United States and Soviet MIRVed ICBMs, the rationale for space-based interceptors would be greatly weakened.

The conceptual linkage between MIRVed ICBMs and space-based interceptors offers an obvious basis for negotiation.[3] Its potential importance should not be underestimated given the high priority the United States has attached to elimination of MIRVed ICBMs and the equally high priority the Soviet side has attached to prohibition of space-based ABM interceptors.

Theatre Missile Defences

Ensuring that limited defence systems do not undermine retaliatory forces requires effective regulation of theatre missile defences. The ABM Treaty prohibits giving theatre missile defence interceptors, launchers and radars capabilities to counter strategic ballistic missiles or their elements in flight trajectory or testing them in an ABM mode. Even with subsequent agreements between the two sides over the application of this provision, however, substantial ambiguity exists as to the appropriate interpretation of the "flight trajectory of a strategic ballistic missile" and "testing in an ABM mode".

Numerous proposals have been made to establish specific thresholds (as the United States, in fact, proposed in the original ABM Treaty negotiations). One concept proposed by the American analyst Herbert Lin, which seems to have attracted the attention of Soviet analysts,

would define testing in an ABM mode as testing against objects having either a speed in excess of 3 kilometres per second or an altitude of greater than 70 kilometres. This would leave a significant safety margin separating the tested capabilities of TMDs and the flight characteristics of the shortest-range strategic ballistic missile now in service, the Soviet SS-N-6 Mod I, whose 2,500-kilometre-range gives its re-entry vehicle a maximum velocity of about 4.5 kilometres per second.[4]

National technical means currently used to monitor ICBM tests would also be able to monitor such restrictions.[5] The parties, however, should not rule out additional cooperative measures, such as exchange of recorded test data, jointly operated radars and other monitoring equipment at ABM test sites, and/or reciprocal access to ABM test sites with such equipment. The agreement in the START Treaty to exchange recorded telemetry data from ballistic missile tests provides a useful precedent and starting point for such additional cooperative measures.

While the two sides might wish to establish such quantitative thresholds, careful consideration must be given to the numerical values chosen and the need to allow for adjustments to new situations. For example, the likely early retirement of the SS-N-6 and the United States Poseidon C-3, whose range of 4,000 kilometres gives a maximum re-entry vehicle velocity of 5.4 kilometres per second, suggests that the numerical values proposed by Lin and others could be significantly relaxed and still leave a margin of safety between tested TMD capabilities and deployed strategic ballistic missile characteristics.[6]

Even with such a safety margin maintained through well-defined thresholds, the inherent ambiguity regarding the potential capabilities of TMDs whose testing presses up to the thresholds would raise concerns about break-out and creep-out potentials. Accordingly, quantitative constraints might have a role to play in regulating TMDs.

Geographical constraints on the deployment of rapidly relocatable TMDs, which the United States intends to deploy, would have limited utility in reducing break-out potential, although they could serve as confidence-building measures.

As in the case of limited defence systems, perfect symmetry in all forms of constraints might not be appropriate, given the unique characteristics and circumstances of each side. For example, United States TMDs need to be rapidly relocatable in order to accompany United States expeditionary and forward deployed forces threatened by short- or intermediate-range ballistic missiles. Since in many cases the threat these same ballistic missiles would pose to the Soviet Union would be to its homeland, it is not clear that all, or even any, Soviet defences against these threats need to be relocatable, and Soviet ABM defences would, of course, provide protection against some of these threats. Accordingly, offsetting asymmetries between TMD and ABM constraints might be considered.

Proliferating Threats Demand Prompt Action

United States policy on strategic defence is now principally shaped by the knowledge that the spread of ballistic missiles and weapons of mass destruction will pose a growing threat to American forces and friends overseas and, in time, to the American homeland itself. The Central Intelligence Agency estimates that by the end of the decade 15 to 20 developing countries will possess ballistic missile capabilities, with most of these nations producing their own missiles. At least six of these are expected to have missiles with ranges up to 3,000 kilometres, and at least three may develop missiles with ranges up to 5,000 kilometres. Many of these countries are now developing, or will soon have the capability to develop, nuclear, chemical or biological weapons that could be delivered on ballistic missiles.

These developments should be of equal or greater concern to Soviet officials. Most of the nations possessing, developing, or seeking to acquire ballistic missiles are in close proximity to Soviet borders. The threat to the Soviet homeland is much more immediate, extensive, and diverse than it is to the United States homeland. The Soviets have, in fact, expressed concern about Israel's Jericho II missile, whose tested range of roughly 1,300 kilometres puts Soviet territory within its reach. Such Soviet concerns can only have been exacerbated by Israel's placing a satellite in orbit, reportedly using a Jericho II–derived launcher. This has led analysts to conclude the Jericho II could carry a 1,000-kilogram payload to a range of 2,800 kilometres, or a 500-kilogram payload to a range of 4,000 kilometres.[7]

Saddam Hussein's use of Scud missiles demonstrated the reality of the ballistic missile threat, while the allied use of the Patriot demonstrated the possibilities of active defence. While the threat to the United States (but not the Soviet) homeland is several years away, this is an argument to act while it will make a difference, not to delay until it is too late. The anti-missile version of the Patriot, whose development was begun with Soviet short-range missiles in mind at a time when few worried about a third world missile threat, was deployed only months before coalition troops faced Saddam's Scuds. Moreover, post-war United Nations inspections of Iraq suggest that proliferation is occurring much more rapidly than had been thought and the nuclear non-proliferation regime is far less effective than assumed.

United Nations inspectors have determined that Iraq was able to produce plutonium, in violation of the nuclear non-proliferation Treaty, even though the facility where this was done was safeguarded by the International Atomic Energy Agency. Moreover, inspectors have found evidence that Iraq had made progress towards building a thermonuclear weapon.

However, the discovery in May 1991 that Iraq had built calutrons to enrich uranium demonstrated the shortcomings of the non-proliferation regime in even starker terms. Calutrons are low-technology devices that Iraq was apparently able to build without importing sophisticated materials or technology. The international non-proliferation regime is built on the assumption that renegade countries can be denied the fuel for a nuclear weapon if the rest of the world maintains effective controls on advanced technologies, such as centrifuge and gas-diffusion equipment, needed to enrich uranium or reprocess plutonium. Since these advanced technologies require materials and equipment available only from the industrialized world, this strategy has offered the prospect for success if stringently enforced.

The entire international non-proliferation regime has been called into question, however, by Iraq's resurrection of a half-century old technology that uses materials or equipment readily available to essentially any country.

This revelation does not mean that non-proliferation efforts are all for nought. But it does mean that no matter how stringently we enforce the non-proliferation regime, we are henceforth going to be far less confident that the regime is effectively preventing the spread of nuclear-weapon capabilities.

Beyond the threat posed by proliferation, United States policy must also address the situation in the Soviet Union. The prospects for cooperation are unprecedented as a result of Soviet reforms and the mutual desire to move away from military confrontation. However, the risk remains of an accidental or unauthorized launch of limited proportions, but catastrophic consequences. Soviet officials, themselves, in a thinly veiled effort to loosen Western purse strings prior to President Gorbachev's London meeting with the leaders of the industrialized democracies,

fanned fears of such dangers resulting from Soviet disintegration if the West did not provide substantial aid.

The genuine possibility of Soviet disorder creates realistic risks the United States must address. While acknowledging the Soviet High Command's efforts to tighten its already strict control over nuclear weapons, one must also note the prospect for continued confusion over the ultimate political control over nuclear forces, as well as incidents such as the commandeering of a Soviet attack submarine during the August coup attempt and the Soviet missile submarine launch accident in the White Sea on the day of President Bush's initiative. Consultation and cooperation between the two sides on nuclear security, safety, and command and control should be pursued. But this cannot be to the exclusion of limited defensive systems—which, given the proliferating threat, both sides would need even if they were to mutually eliminate their strategic nuclear arsenals.

Conclusion

The world has changed in the two decades since the ABM Treaty was signed. The ABM Treaty must be brought up to date to address these new realities. This can be done without undermining the ABM Treaty's objectives of preserving the credibility of each side's retaliatory deterrent, decreasing the risk of the outbreak of war involving nuclear weapons, and promoting the achievement of further limitations on strategic offensive nuclear weapons. Indeed, unless the question of strategic defences is resolved, the present opportunity to significantly reduce and restructure offensive forces could be lost.

Notes

1 Michael Miller, et al., *Arms Control Regimes and Ballistic Missile Defense*, RAND, R-4071-A, 1991.

2 A brief discussion by the United States legal advisor to the ABM Treaty negotiations of why article I does not preclude a country-

wide defence by such deployments can be found in John B. Rhinelander and Sherri Wasserman Goodman, "The legal environment", in Antonia H. Chayes and Paul Doty, *Defending Deterrence: Managing the ABM Treaty Regime into the 21st Century*, Pergamon-Brassey, 1989, p. 55.

3 This linkage between MIRVed ICBMs and space-based interceptors and its implications for negotiations was first brought to my attention in the mid-1980s by R. James Woolsey. While not specifically addressing space-based interceptors, Soviet Defence Minister D. Yazov indicated shortly before his retirement in August 1991 that the Soviet position on United States proposals to limit Soviet ICBMs is linked to the prevention of the United States "deploying wide-ranging ABM defences". *Izvestia*, 2 August 1991, Union Edition, p. 2.

4 Herbert Lin, *New Weapon Technologies & the ABM Treaty* (Pergamon-Brassey, 1988), p. 39. Poseidon C-3 data also from Lin, p. 13.

5 Ibid., p. 40.

6 Similar considerations would apply if thresholds were defined in terms of the characteristics not of the testing targets, but of the interceptors, e.g., interceptor burnout velocity, volume, etc.

7 See Janne Nolan and Albert Wheelon, "Ballistic missiles in the third world", in *New Threats: Responding to the Proliferation of Nuclear, Chemical, and Delivery Capabilities in the Third World* (The Aspen Strategy Group and University Press of America), 1990.

Arms Exports Controls: Developments in Domestic Legislation

Italian Legislation on the Export of Armaments

Cecilia Corsi

The export of armaments in Italy was regulated, until quite recently, by general provisions regarding foreign trade, and only in the last few years were certain ministerial decrees approved which specifically governed this subject.[1] There was, however, no precise law: the rulings were fragmentary, there was no normative frame of reference and much was left to administrative practice.

Finally, in July 1990, the Italian Parliament succeeded in passing Statute 185, legislation which lays down new rules for controlling the export, import and transit of defence materials and for granting the relevant licences to produce them.[2]

Statute 185 does not cover ordinary arms. Article 2 of the Statute defines weapons materials as those which, by virtue of their technical characteristics of construction or design, may be regarded as principally intended for military use by armed forces or the police.[3] The Statute prohibits the manufacture, import, export and transit of all biological, chemical and nuclear weapons, and it prohibits research directed towards their production or towards developing the relevant technology.

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With this new Statute, the Legislature has at last provided a normative frame of reference for Government, the Executive and all concerned with these matters. The Statute is intended to increase transparency in the armaments market by regulating the procedures for granting licences and by identifying the competent bodies involved, as well as by providing for parliamentary control of the Executive and by taking steps against the illegal traffic in arms. However, it is not clear whether among the objectives of the Legislature was the goal of *reducing* the commerce in weapons materials, in particular their export.

The Statute emerged as a compromise among various political pressures and various ways of addressing the question of the arms trade, and this is abundantly clear both in the text approved by Parliament and in the preparatory drafts.

A law regulating armaments may tend to favour the activities of those operating in the field, and thus become a point of reference by which the trade is facilitated, or it may attempt to achieve a reduction, even a gradual reduction, in the commerce of weaponry. Although the Legislature has clearly stated in Statute 185 that the export of weapons materials must be in line with the Italian Constitution, *it has not always realized the implications of this statement*. There remains a doubt as to whether, by this Statute, Parliament intended not only to regulate the market and prevent illegal traffic, but also to lay the basis for a general reduction in the arms trade.

For example, the Statute makes reference to the question of converting military industries to civilian uses: article 1, paragraph 3, affirms that the Government must make suitable provision to support the gradual shift in production (conversion to civilian purposes) of the defence industry. The Statute establishes a coordinating office to deal with the production of weapons materials, which has the task of providing advice and information and present-

ing proposals. The Office is to study the problems and prospects of the manufacturing sector in relation to international agreements, and to research means of converting industries and finding non-military uses for weapons materials. These regulations are, however, extremely bland; the articles are couched in very general terms and present no real challenge to Government.

The Statute represents a compromise between three conflicting aims: to safeguard a sector of the Italian economy that employs about 80,000 workers; to maintain an efficient industrial base capable of meeting the nation's defence requirements; and to support the idea of disarmament, even gradual disarmament. Only the practical application of the Statute will reveal which of these aims is destined to prevail, since neither the approved text nor the preparatory drafts furnish clear indications.

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First of all, the Statute sets out the general principles within which trade in armaments may take place. Paragraph 1 of article 1 states that the arms trade must be in conformity with Italy's foreign and defence policy and that it must be regulated by the State in accordance with the principles of the Constitution, which rejects war as a means of solving international disputes.

This is indeed one of the important aspects of the Statute, which should be emphasized: the arms market involves problems that reach far beyond general questions of foreign trade. It is significant that the Statute transfers the power to grant licences from the Minister of Foreign Trade to the Minister of Foreign Affairs.[4] It is also significant that the Legislature intends to harmonize this sector not only with Italy's defence requirements, but also with its foreign policy. A clarification is necessary here: the act of making foreign policy the point of reference for the whole

sector and of recognizing that economic and industrial motives are no longer the only considerations does not, in itself, commit the Executive to specific objectives. The Statute's assertion may remain ambiguous. Very often, in fact, the arms trade is used, especially by the major Powers, as an "instrument of foreign policy". This, in my view, is something very different from the correct interpretation of Statute 185, which states that the export, import, and transit of warfare materials must conform to Italy's foreign policy and defence policy.

When I speak of the arms trade being used as an "instrument of foreign policy", I refer to the fact that the sale of armaments, especially by the major exporting countries, is frequently a means of exerting pressures and placing conditions on the importing country in order to create alliances or spheres of influence in a particular area and to strengthen the military resources of friendly countries.[5] To understand the rationale behind the Statute's assertion that the arms trade must conform to Italian foreign policy, the statement has to be seen in the context of the entire text. In particular, it should be seen in relation to the second part of article 1, which states that the arms trade must conform to the principles of the Constitution.

Article 11 of the Italian Constitution states that:

> "Italy condemns war as an instrument of aggression against the liberties of other peoples and as a means of settling international controversies; it agrees, on conditions of equality with other States, to such limitations of sovereignty as may be necessary for a system calculated to ensure peace and justice between nations; it promotes and encourages international organizations having such ends in view".

If it is thought that this article adumbrates juridical criteria to guide the authorities' choices in foreign policy, then the assertion in the Statute becomes very significant.

The implications of article 11 of the Constitution can truly be said to resolve the ambiguities or uncertainties presented by the Statute. Since the Italian State is committed to conducting a foreign policy directed towards international peace, it is clear that trade in weapons materials cannot possibly be "in line" with the Constitution.

The assertion in paragraph 1 of article 1 is further developed in paragraphs 5 and 6 of the same article. Paragraph 5 establishes the basic criteria which are to regulate trade in armaments and the granting of production licences. It confirms that this trade must not run counter to the Constitution, to Italy's international undertakings, and to those fundamental claims of State security: the struggle against terrorism and the maintenance of good relations with other countries. There must also be adequate guarantees as to the ultimate destination of the materials. Paragraph 6 adds some important details regarding export and transit. Under (*a*) it forbids exports to countries in a state of armed conflict contravening Article 51 (right of individual or collective self-defence) of the United Nations Charter. Exceptions are allowed in response to Italy's international obligations or a decision of the Council of Ministers, to be adopted on agreement by the Chambers.

Article 1, paragraph 6, forbids under (*b*) the export and transit of armaments to countries whose policies are at variance with article 11 of the Constitution. Here it is intended to make explicit what in any case can be inferred from the Constitution: it is forbidden to export arms to countries which show themselves prepared to use them in aggressive actions against other peoples or to resolve international disputes. Under (*c*), paragraph 6, export and transit to countries placed under total or partial arms embargo by the United Nations are forbidden. Under (*d*), in conformity with article 11 of the Constitution, the Statute forbids export to countries whose Governments are guilty of

ascertained violations of international human rights agreements.

Finally, the Statute confirms the veto on export to countries that receive development aid from the Italian State but that devote resources in excess of their defence requirements to their military budgets.

It is significant that article 1 of the Statute lays down criteria to be followed by the competent authorities in granting export licences. It should be emphasized that the Statute does not limit itself to matters of procedure, but actually dictates the principles to be followed by the competent bodies in granting licences. Although obviously extremely general, these principles are significant: they form guidelines and act as limits on the discretion of the Executive. Parliament has finally established its prerogative in this field, which, until now, remained the exclusive preserve of the Government.

In paragraph 4 of article 1, the Statute places an important limitation on export and transit, permitting them only if undertaken in conjunction with the Government, or with enterprises authorized by the Government, of the importing country. By this means the Legislature seeks to engage the responsibility of the Governments of countries to which arms are exported, so as to have better guarantees as to their final destination and use. As will shortly be seen, stringent national regulations are required to repress the illegal traffic in arms; regulations, however, are often not sufficient. It is indeed essential to involve the authorities of the importing country, who should commit themselves to prohibiting the re-export of materials acquired.

A notable limitation of the Statute's scope is sanctioned by paragraph 9 (*b*) of article 1, which makes an exception in favour of direct export from State to State for purposes of military assistance according to international agreements. This is a very broad exception, and one that

has a bearing on a substantial portion of the armaments trade. Authorizations agreed by Governments in international accords are not subject to Statute 185. It should, however, be said at once that such authorizations are already subject to parliamentary scrutiny. International agreements on military supplies come under the heading of political treaties, which, according to article 80 of the Italian Constitution,[6] require ratification by the Chambers; Parliament is therefore required to participate in the genesis of all such agreements.

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With Statute 185, procedures for the granting of licences have at last been fixed, the competent bodies have been determined and the terms by which authorities must decide have been dictated. This is doubly important. On the one hand it makes for greater transparency in the arms market, so that more stringent controls may be exercised and illegal traffic restricted, and, on the other, is an aid for all who operate in the sector, who at last have fixed administrative procedures for obtaining licences to engage in the arms trade.

The Statute identifies various phases in the complex process of granting licences, taking cognizance of different interests (foreign policy, defence policy, industrial and commercial interests) which have a bearing on the arms trade. An initial phase is handled by the Interministerial Committee for the Exchange of Armaments. This Committee, set up by Statute 185, comes under the presidency of the Council of Ministers. It is composed of those ministers most concerned with the subject,[7] and chaired by the President of the Council. It is the President's task to formulate general policy objectives for exchange in the defence sector and to issue general directives for the import, export and transit of weapons materials. The President also superin-

tends the activities of those bodies concerned with implementing the Statute. The Committee also determines which countries fall within the prohibition envisaged by article 1, paragraph 6. The policies and directives formulated by the Committee must be communicated to Parliament.

A second phase is that dealt with under heading III of the Statute, which speaks of "authorization to negotiate". Statute 185 establishes the obligation of communicating to the Minister of Foreign Affairs and to the Minister of Defence the commencement of contractual negotiations for the export, import or transit of warfare materials. The Statute directs that within 60 days the Minister of Foreign Affairs, together with the Minister of Defence, may forbid the continuation of negotiations. In the case of countries belonging to the North Atlantic Treaty Organization (NATO) or the Western European Union (WEU), or where there are particular intergovernmental agreements, a communication to the Minister of Defence is sufficient; he may impose conditions or limitations on the negotiations within the shorter period of 30 days. The Statute explicitly states that the fact of having obtained permission to negotiate does not confer upon the company the right to future permissions, that the arrangements may still be subject to conditions or limitations and that they may be suspended or revoked on expiry of the terms of the permission granted. Permission to negotiate is granted for three years and may be renewed.

The third phase is the actual authorization of import, export and transit, and the granting of industrial production licences for armaments. It is regulated by the Minister of Foreign Affairs, to whom all requests for permission must be addressed, and it is the Minister who initiates the preliminary inquiries. The Minister of Foreign Affairs decides in conjunction with the Minister of Finance upon the advice of a committee[8] having the function of a technical

consultative body, and it is this Committee which, in practice, examines the requests and evaluates their expediency and their conformity to law and to the directives of the Interministerial Committee for the Exchange of Armaments.

The Statute explicitly lays down the obligation of suspending or revoking even the above-mentioned permissions whenever it is apparent that prescribed conditions have not been fulfilled, and it is important that the possibility of revocation or suspension be a real one. Given the length of time that negotiations may take, it is by no means impossible that, after a licence has been granted, certain essential conditions may not be fulfilled.

One of the chief questions to be faced in regulating the export of armaments is the control of their final destination. As we have seen, article 1, paragraph 5, forbids the export of arms where there are inadequate guarantees as to their final destination, and paragraph 4 stipulates that negotiations may be entered into only with a Government or with an enterprise authorized by a Government; part of the reason for this is to ensure better guarantees as to the ultimate destination of the material.

Like the legislation of many other States,[9] Statute 185 requires that the request for permission to export be accompanied by an "end-use certificate", issued by the Government of the importing country, attesting that the material is for its own use and will not be re-exported without previous permission from the competent Italian authorities.

What is particularly important is that the Statute requires the end-use certificate to be issued by the Government of the importing country and not merely by the importing enterprise. As we have already seen, in order to hamper illegal traffic in arms, it is necessary to ensure the commitment of the authorities of the importing country to oversee the transaction. For this purpose it would be help-

ful if there were a normative pact by which States would undertake not to permit re-exportation without the prior consent of the exporting country and would maintain stringent controls over all enterprises operating in the sector. However Statute 185 makes no reference to end use in the sense of forbidding the transformation of materials acquired: it speaks only of an undertaking not to re-export the materials to third parties.

The end-use certificate must be validated by the Italian diplomatic or consular authority accredited to the country which releases it, as proof of authenticity. Cases of forged end-use certificates have not been infrequent.

In transactions with countries which have agreed on an "import certificate/delivery procedure", and where the purchaser is a non-governmental organization, it is sufficient for an "international import certificate" to be attached to the request for authorization.

Still with a view to preventing illegal traffic in armaments, the Statute makes provision for follow-up controls to ensure that the materials have indeed reached the destination authorized. Article 20 stipulates that the enterprise must communicate to the Minister of Foreign Affairs, in a timely fashion, the conclusion, even if partial, of the operations authorized. Within 180 days[10] of the conclusion of the operation, the enterprise must send a "delivery verification certificate" to the Minister of Foreign Affairs, in the case of those taking part with Italy in the above-mentioned arms export controls. Otherwise, customs import entries for the country of final destination must be sent, or proof that the importing enterprise has taken charge of the goods or equivalent documentation must be released by the governmental authority.[11]

At this point it will be useful to summarize the distribution of responsibility among the various departments of the Italian Government. There is a directive phase and a coordinating and informative phase, which are rightly

subject to the President of the Council (Interministerial Committee for the Exchange of Armaments and the Coordinating Office for the Production of Armaments Materials). The armaments market involves many and complex interests, and it is important that they should all be brought together under the aegis of the presidency, though obviously with the assistance of other ministries concerned.

With respect to individual authorization procedures, responsibility lies no longer with the Minister of Foreign Trade, but with the Minister of Foreign Affairs. The Statute rightly recognizes that the question of trade in armaments is not merely an economic one: export, in particular, has complex implications for foreign policy. During this phase too, the ministers involved naturally make their contribution, through their representatives in the Consultative Committee. In the authorizing procedure an important role is played by the Minister of Defence, who during this phase assists the Minister of Foreign Affairs. The Minister of Defence's contribution is to ensure that the sale of certain materials does not compromise national defence and that classified technical information is not passed to unauthorized sources.

The bulk of the responsibility falls then upon the troika of President, Minister of Foreign Affairs and Minister of Defence. The Statute correctly identifies the governmental departments which should have competence over the material concerned. Through the Interministerial Committee for the Exchange of Armaments and the Consultative Committee, other ministers have their say. I should observe that the armaments trade has its effect on internal security, on industrial policy, on foreign trade and on monetary affairs.[12]

With its Statute 185, the Legislature has finally subjected the arms trade to disciplinary control, establishing the framework within which the Executive must act. The Statute also provides for specific modes of control by

Parliament on the conduct of the Executive. Article 5 directs that the President of the Council must himself inform Parliament by 31 March of each year concerning the operations authorized and carried out by 31 December of the preceding year. This article is one of the lynch-pins of the entire Statute, for parliamentary control in this matter is fundamental.[13]

We have seen how important it is to establish stringent controls to eliminate the illegal traffic in armaments, but it is well to recall that the illegal trade represents only a small portion of the whole armaments market: the great majority of arms movements take place under authorization by the competent governmental authorities. This is why it is vital to establish checks on the activities of the Executive in this field. It is important, in other words, to enable Parliament to exercise that degree of control to which it is entitled over a matter so delicate in its effects on the foreign and defence policies of the nation. The annual statement which the President of the Council has to make to Parliament will become one of the means by which Parliament will be able to evaluate governmental foreign policy, and therefore also to direct it.[14]

Parliament's power of direction and control is conditioned by the quantity and quality of the information supplied to it. Since Statute 185 has established precise obligations regarding this information, it should now be possible for Parliament to verify the conduct of the Government and of the public administration. Article 5 is of the greatest importance since, through it, the Government's decisions on certain policy questions will be made known—something which, until recently, has not been the case.

This is bound to lead to greater transparency in the arms market, and also to reduction in the collusion possible between public administration and the exporting enter-

prises, with the further effect of permitting informed public debate on the subject.

Notes

1 See *Decreto ministeriale* of 4 December 1986 in *Gazzetta Ufficiale*, 6 December 1986; *Decreto ministeriale* of 19 October 1987 in *Gazzetta Ufficiale*, 31 October 1987; and *Decreto ministeriale* of 18 June 1988 in *Gazzetta Ufficiale*, 23 June 1988.

2 *Legge* of 9 July 1990, No.185, in *Gazzetta Ufficiale*, 24 July 1990, "Nuove norme sul controllo dell'esportazione, importazione e transito del materiali di armamento". On 23 February 1991 the relevant executive regulation was issued and published in the *Gazzetta Ufficiale*, 23 March 1991.

3 It is expected that an interministerial decree will establish the categories of warfare materials. For the purposes of export, spare parts and components for such materials, as well as designs, plans and any documentation or information necessary for the manufacture, use or maintenance of the materials, also come within the scope of Statute 185.

4 Before the Statute became law, it was the Minister of Foreign Trade who granted authorization to export.

5 Particularly in the case of the United States and the USSR, arms transfers are determined by political motivations; see M. Brzoska, "The nature and dimension of the problem" in *Transparency in International Arms Transfers* (United Nations publication, 1990) (Disarmament Topical Papers 3), p. 16:

> "In both States, arms transfers have been primarily used as an instrument of foreign policy. The precise role of arms transfers depends on the availability and perceived usefulness of other instruments, such as economic and military measures. Within the range of foreign policy instruments available, transfers fall between more coercive ones, like the show of force or direct military intervention, and less coercive ones, like economic assistance or diplomatic exchanges."

See also C. Catrina, "Supplier policies and recipient dependence" in *Transparency in International Arms Transfers*, p. 34:

> "For a very limited number of main supplier States, arms exports are an integral part of foreign policy. For them the economic benefits of arms exports are certainly relevant, but probably of secondary importance if compared to the larger political objectives pursued by arms transfers. Smaller supplier States usually do not have as wide zones of interest or responsibility, but in some instances arms exports may nevertheless be employed to support actively specific foreign policy objectives."

As regards Italy, economic interests have mostly dominated in this sector; see the article by C. Catrina, cited above, p. 30:

> "The arms export policy of some States may have a second component, which could be termed 'economic-industrial', because it concerns the economic benefits of arms exports and their contribution to the viability of domestic arms production."

6 Article 80 of the Italian Constitution states: "The Chambers authorize, by law, ratification of international treaties of a political nature, or which provide for arbitration or judicial regulation, or imply modifications to the nation's territory or financial burdens, or to laws."

7 Ministers who are on this Committee are those belonging to Foreign Affairs, Internal Affairs, Finance, the Treasury, Defence, Industry, State Participation, and Foreign Trade. Other ministers may be invited to sessions of the Committee.

8 The Statute makes provision for a consultative committee at the Ministry of Foreign Affairs, composed of one representative from that Ministry, two representatives from the Ministries of Internal Affairs, of Defence, of Foreign Trade, and one representative from the Ministries of Finance, Industry, State Participation, and Environment. The Committee may also make use of experts.

9 For the regulations of the major exporting countries on this subject, see C. Corsi, "National legislation on the export of armaments" in *Transparency in International Arms Transfers*, p.105.

10 Allowance is made for extensions of this period.

11 Statute 185 does not require that these documents be authenticated by the Italian diplomatic or consular authorities, unlike article 7 of *Decreto ministeriale* of 4 December 1986.

12 In this connection it should be recalled that all banking operations concerned with the export, import or transit of armaments materials have to be authorized by the Minister of the Treasury.

13 Among the legislation in force in the major exporting countries, only that of the United States requires regular controls by Congress both on sales agreements entered into by the Government and on licences granted to private persons.

14 According to article 5, Parliament's action is limited to subsequent control, though, as already indicated, the Statute makes provision in the case of export to countries in a state of armed conflict (article 1, paragraph 6 (*a*)) for the intervention of Parliament in the authorizing procedure, and in fact the decision of the Council of Ministers must be preceded by a hearing in the Chambers.

Strategic Exports Control and Disarmament in France

Bertrand Warusfel

During the last few decades, France has become a nuclear Power and one of the world's leading arms exporters. Its defence industry provides direct employment to 300,000 people and indirectly affects 1 million jobs. In addition, French companies and laboratories are involved in most modern civilian technologies, especially those which may have an indirect military application, such as nuclear energy, data processing, telecommunications, aeronautics, space launchers and satellites, and the chemical industry. For this reason, all developments and discussions in the areas of disarmament and non-proliferation are of particular concern to France. As a permanent member of the United Nations Security Council, France cannot relinquish its obligations with respect to the maintenance of international peace solely for the sake of its own military and industrial interests.

War Materials Export Regulation in France

Principles of Regulation

Three main principles sum up France's approach to war materials regulation: all industrial and business activ-

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ities involving such materials are subject to advance approval; all exports are prohibited except by specific governmental waiver; and the French administrative authorities retain absolute discretionary control over the granting of such waivers.

The French Government organized the manufacture and sale of war materials in 1939, on the eve of the Second World War. A decree-law of 18 April 1939, still in force today, lists eight categories of materials considered to be "war materials, weapons and munitions" and establishes the rule that "companies engaged in the production or sale of war materials and of defence weapons and munitions (categories 1, 2, 3, 4) may only operate, and the activities of their intermediaries or publicity agents may only be carried out, upon governmental approval and under governmental control".[1] As a result, all companies manufacturing or selling arms are subject to governmental controls bearing on the nationality of the company's capital and management, the regulations for the protection of confidentiality and security within these companies, the technical level of the production process and the materials produced, as well as their cost price.

The same decree-law also stipulates that "exports of war materials and related materials under any customs regime without approval is prohibited".[2] The principle therefore is to prohibit arms exports, which entails prohibiting all operations associated with their export:

> "No purchase order for the export of materials referred to in the following article may be accepted without advance approval under the conditions established by interministerial order. Similarly, no demonstration or test for the purpose of transfer or delivery involving the materials referred to above and defined under the aforementioned order may be carried out without such approval. The same provisions shall apply to the transfer of commercial manu-

facturing licences and to all the documents required for carrying out such manufacture".[3]

Arms exports from France thus become exceptions to the principle of non-export and are authorized by the Government on a limited basis. The same situation exists for war material imports.

The issuance of authorization for the manufacturing, sale and export of war materials therefore remains a prerogative of the Government, which, in this respect, is endowed with great freedom of action. While a decree dated 12 March 1973 establishes some specific rules regarding the conditions to be met in order to obtain the authorization to manufacture and sell, no mandatory legal criterion exists under French regulations that would set conditions for the export of arms. Such export authorization decisions therefore fall within the Administration's discretionary power and come under what French public law terms "governmental acts", that is to say, acts which are not subject to recourse to administrative tribunals by reason of the close correlation between arms exports and political and diplomatic options essential to the State.

The question of international arms trade control, in France as in many other countries, is therefore entirely in the hands of governmental officials. Several administrative procedures are available to them for that purpose.

Administrative Procedures Governing Arms Export Control

In France, exporting war material requires a number of consecutive authorizations that are dealt with in detail in a decree dated 12 March 1973. They are: authorizations to solicit and negotiate sales, followed by the final export authorization (i.e., a waiver of the export prohibition). This multi-level system is peculiar to France, as most Western countries have a single export authorization procedure. A special list (divided into four categories: A, B, C and D)

brings together all materials subject to these export control procedures. The list, which is part of an order dated 2 April 1971, is more specific than that mentioned above for materials requiring manufacturing and sales authorizations. While their contents are fairly similar, the 1971 list includes some civilian products such as space launchers and helicopters in addition to war materials proper.

The first two authorizations (to solicit and to negotiate sales, respectively) are issued on behalf of the Prime Minister by the General Secretariat for National Defence upon authorization from the Inter-Departmental Study Commission for War Materials Exports (*Commission interministérielle d'étude des exportations de matériel de guerre*) (CIEEMG)). The Commission, created in 1949 and modified in 1955, meets monthly under the chairmanship of the General Secretariat for National Defence and is attended by the representatives of the three ministries chiefly concerned (Finance, Foreign Affairs, Defence), with the frequent participation of other departments (Industry and Cooperation, for example). In practice, the office of the International Relations Delegation (*Délégation aux relations internationales*) (DRI)) of the General Armaments Delegation carries out the prior investigation of authorization requests submitted. Indeed, it is this office of the Ministry of Defence which coordinates daily with French manufacturers involved in arms export projects. Each authorization request must provide fairly precise information regarding the material, the country for which it is destined, the possible intermediaries, and the total sales anticipated. Once a solicitation authorization is granted, it remains valid for five years, while the validity of the other authorizations (negotiation, sale) is limited to one year. In the first quarter of 1991, the Government considered relaxing the system by eliminating the requirement for advance approval of the sales solicitation phase. However, disclosure of this project in the press some weeks

after the end of hostilities with Iraq[4] persuaded the Government to postpone the easing of this procedure as it might appear a form of laxity on its part at a time of great concern about proliferation and the lack of arms control.

Once an export contract is concluded following issuance of the first two authorizations, the regulations require that the manufacturer obtain two additional authorizations: final approval from CIEEMG for the sale of the material, and a War Material Export Authorization (*Autorisation d'exportation de matériel de guerre*) (AEMG)) from the Ministry of Finance; the latter constitutes the official document allowing the material to leave the national territory as a waiver of the export prohibition applying to all armaments.

The authorization for sale is issued by the General Secretariat for National Defence upon notice from CIEEMG under the same conditions as the authorizations for solicitation and negotiation. Legally, the sales authorization cannot be granted without having been preceded by the corresponding sales solicitation and negotiation authorizations. On the other hand, prior issuance of these two authorizations does not ensure that the sales authorization will be automatically granted, and it may still be denied or postponed either for specific military reasons or as a result of political and strategic changes occurring in the region. Although some criteria remain unofficial and are not mandatory, they are used regularly to assess the advisability of a sale involving the export of war material:

> "the advisability from the diplomatic standpoint of the sale of a particular type of armament to a specific client in terms of present or foreseeable relations between France and that country; the economic consequences, particularly as they affect the balance of trade between the two countries; the client's solvency and the credit terms; preservation of secrecy..."[5]

Once the sales approval has been granted, the French manufacturer has one year (with the possibility of renewal) to manufacture and deliver the material; but before it is actually exported, an AEMG from the General Customs Directorate (Ministry of Finance) must be obtained. The AEMG is the official customs document required to ascertain that export is made under waiver of the general export prohibition, as mandated by the decree-law of 1939. The request for an AEMG and the statement of export authorization must be submitted by the exporter to the DRI, a branch of the General Armaments Delegation, to be approved by it and transmitted in turn, first to the General Secretariat for National Defence, and then to the Ministry for Foreign Affairs. These written statements make it possible for the ministries concerned to verify that the export request was in fact preceded by a sales authorization issued with the approval of CIEEMG. They also make possible a final check of the advisability of exporting before the material actually leaves the country. The General Customs Directorate delivers the AEMG to the exporter after approval by all ministries.

In order to complete the authorization and control procedure, the French authorities have two additional devices that are meant to guarantee that the material is delivered to the intended client and to ensure that it is not diverted. One, largely a legal device, consists of a clause inserted in the sales agreement that prohibits re-export (*clause de non-reexportation*). Such a clause may read as follows:

> "The buyer hereby agrees not to sell, lend or deliver, for any reason, free of charge or otherwise, on a temporary or final basis, to any third party, without the prior written approval of the French Government, the materials which are the object of the present agreement, including materials and parts covered by the service agreement, documentation,

operating instructions and any other information connected with the present agreement."

The other device consists of a security deposit generally required to be paid to Customs in the form of a lump sum, which is held by it pending proof from the exporter that the material has indeed reached its destination and that it has not been re-exported.

Control of the Export of Other Strategic Products and Technologies

In addition to its control of war materials proper, France, like most other Western countries, extends its control to other kinds of products and technologies that may be put to indirect military use. These may be grouped in two categories: dual-use products and technologies monitored by the Coordinating Committee of Western countries regarding export controls (COCOM) and products and technologies controlled for "non-proliferation" reasons.

Products and Technologies Controlled under COCOM

France has participated in the consultation process with other Western countries under the aegis of COCOM since its inception in 1949 on the initiative of the United States. The Committee, established in Paris, includes 17 countries (all the members of the Atlantic Alliance except Iceland, plus Japan and Australia). Its function is to embargo exports of a series of products and technologies of a military and nuclear nature, and also of dual-use civilian products destined for the USSR, China and nine other communist or formerly communist countries (Poland, Hungary, Czechoslovakia, Bulgaria, Romania, Albania, the Democratic People's Republic of Korea, Viet Nam, and Mongolia). Although international developments will probably greatly change the functions of COCOM, it is still in operation and France continues to apply its directives.

France publishes regularly the list of products and technologies established and updated by COCOM in the form of a "notice to importers and exporters concerning products and technologies subject to end-user control". This information, published in the *Journal Officiel*,[6] consists of a list of war materials (which covers products similar to those controlled nationally by war materials regulations), a list of nuclear materials and plants, and many articles on high technology civilian industrial products and processes (data processing, telecommunications, robotics, machine tools, aeronautics, electronics, etc.) that could be used indirectly for military purposes. A mandatory statement heads the lists, which describes the customs export control procedures applicable to those products and technologies.

This "end-user control" (*contrôle de la destination finale* (CDF)) procedure is based on a few simple rules. In the first place, all of the products mentioned in the list are considered to be "prohibited goods" as defined by the Customs Code, which means that their export is prohibited except by special authorization. That authorization is given by Customs in the form of an export licence, "Licence 02". This licence must be requested for all exports of products subject to end-user control. For countries members of COCOM (the "Group 1 countries"), and for seven others (Austria, Finland, Ireland, Singapore, Sweden, Switzerland, Yugoslavia, and for Hong Kong as well—the "Group 2 countries"), applications for Licence 02 must be accompanied by an import certificate already issued by the local authorities to the foreign client. Similarly, for all these countries (except Switzerland), a second certificate must be submitted by the client on receipt of goods, to be transmitted to the French Customs.

After a licence application has been made, it is first examined by SAFICO (*Service des autorisations financières et commerciales*/Financial and Commercial Authorization

Service within the General Customs Directorate) and then by the Ministry of Industry to verify that the product concerned is in fact referred to in the control lists. If such is the case, the French Government alone may decide whether to authorize or to prohibit the proposed export unless the country of export is one of the 11 "target countries" (i.e., the 11 communist or formerly communist countries referred to above), in which case the French Government is required to submit to COCOM a request, which must receive the unanimous agreement of the 16 other members before France can issue the export licence. The second function of COCOM, in addition to issuing lists, is to grant waivers to the embargo on a case-by-case basis. If COCOM should fail to reach a unanimous decision to grant the waiver, then Licence 02 may not be issued to the French exporter, whose export application will be denied as a result.

There is only one exception to the mandatory referral to COCOM for export of end-user controlled products to the target countries: cases where the list of controlled products provides for an "administrative facilitation". This allows the export of lower-performance technology products to target countries to be the exclusive decision of the exporting country. In that case, Licence 02 is issued by the French Government at its sole discretion.

It is also possible for the exporter of end-user controlled products to non-target countries to make use of specific export licences such as the distribution licence, permitting issuance of a permanent export authorization—against the exporter's commitment to accept some internal controls—without formalities for specifically designated products to specifically defined clients. Since February 1991, there is also a G1 Licence which makes it possible to export most controlled products without specific formalities to Ireland and to the countries belonging to COCOM. Finally, there are some specific licences to export spare

parts and for the temporary export of portable professional equipment.

Proliferating products and technologies

France also participates in various international activities aimed at limiting the international proliferation of certain technologies and weapons considered particularly dangerous.

Firstly, France publishes a list of nuclear products and materials established by the group of nuclear equipment suppliers called the "London Club". The latest list was published in the *Journal Officiel* of 12 August 1988. All products, plants or materials listed (most of which are also on the COCOM list) may also be exported after issuance of Licence 02, which is in turn issued after approval from an interministerial group, the Restricted Interministerial Group, under the authority of the Council for Foreign Nuclear Policy.

With regard to ballistic products, France is a founding signatory to the Missile Technology Control Regime (MTCR) of 1987, an agreement among the seven members of the group of most industrialized nations. Under the agreement, export controls apply to all products and technologies related to the manufacture and guidance of all space vehicles capable of carrying a payload exceeding 500 kg over a distance exceeding 300 km. However, because in France most products on the MTCR list are already on the war materials list of 1971 (see above) and on the end-user control list of COCOM products, the French authorities have not considered it useful to publish a special list. Nevertheless, in 1990, a preliminary reduction in the COCOM list made it necessary for France to publish a short list of four ballistic items, previously controlled by COCOM, which had just been released for export to Eastern countries while remaining on the controlled list for

other countries by virtue of MTCR and for the sake of ballistic non-proliferation.[7]

Similarly, although France is conducting a large-scale international campaign for a new convention banning chemical weapons, to date it has yet to publish an export control list in this area. Although it is taking part in the work of an informal group of Western countries on these matters (Australia Group), the French Government has chosen to exercise discreet export controls over proliferating chemical products through informal contact with leading French suppliers and manufacturers in that sector. Moreover, French exporters, like other European exporters, are required to abide by the control regulations established in 1989 by the European Community for eight precursor chemical products.[8]

Adaptation of the French System to Disarmament Needs and to the New International Context

The French export control system, as it stands today, does not yet wholly fulfil disarmament needs nor those arising from the new international context brought about in particular by the collapse of the Eastern European communist regimes and by the Gulf conflict. As a result, adaptations are in preparation or being implemented, and an official announcement was made of a comprehensive disarmament plan (see below), which will define the French Government's conduct in the years to come.

Necessary Adaptations

With respect to the products controlled by COCOM, France does not appear inclined to put forward any initiatives of its own beyond those jointly adopted by the Committee's 17 members. These consist mainly of the adoption of a new, drastically reduced list of products and technologies termed the "core list". The list was adopted

in the first half of 1991 and came into effect in various other countries on 1 September 1991. France, for its part, is expected to publish it by the end of 1991. Like its COCOM partners, France has also reached bilateral agreements with Hungary, Poland and Czechoslovakia to ease imports of French technology controlled by COCOM in these three countries, on the condition that they apply their own controls. It would appear that in the future the French Government will favour a continued and progressive relaxation of COCOM regulations in this respect, as liberalization progresses and there is a further opening up of the Soviet political and economic situation.

The area of proliferating products is more complicated. Here, France has indicated its intention to strengthen modalities in the struggle against different types of proliferation in the wake of the Gulf war. A statement concerning chemical products and technologies appears to be ready for publication, but remains blocked at the interministerial level. Also, when COCOM's new core list is published in France, some ballistic and electronics products that were formerly controlled under COCOM and are now freed are to be kept under national control for reasons of non-proliferation. In time, it would seem that the COCOM list, which served as a screen to monitor exports of sensitive products, not only to communist countries but beyond them to the whole world, will no longer be able to play this role and it would be advisable for France and its partners to adopt specific lists and procedures to control proliferation of some products towards unstable or aggressive countries of the south.

With respect to war materials, France is currently working, through both European and international channels, towards the creation of a kind of good conduct code for arms exports, which would be put into effect among the major arms suppliers. In the meantime, a regulatory text replacing the order of 1971 is expected to be issued in the

coming months, which will provide, in particular, a new reference list covering war materials subject to export control and to CIEEMG notice. The content of the list should be closer to that established by COCOM for arms materials and should also focus more clearly on certain areas, such as specific production machinery and types of military components.

Announcement of a Comprehensive Plan

On 3 June 1991, the President of the Republic, François Mitterrand, made public a global disarmament plan that consolidates all French proposals on these matters for the years ahead. One of the main points of the plan is the announcement that France will accede to the nuclear non-proliferation Treaty, which it was already observing unilaterally but had not officially signed. In addition, the plan reaffirms France's intention to promote stronger measures of chemical disarmament (an appeal for the signing of an international agreement); bacteriological disarmament (proposal for the addition of a protocol on verification to the 1972 biological weapons Convention); and ballistic missile control (call for a more comprehensive and stronger MTCR). Lastly, the French President called for a concerted policy of "restraint" among the major armament exporters and the establishment of regional machinery for the settlement of conflicts and control of the balance of military forces. The statement concludes that it is therefore the task of the United Nations Security Council to endorse and, if necessary, harmonize those disarmament and non-proliferation policies. The Council should promote regional and multilateral disarmament and non-proliferation agreements, as well as agreements on specific categories of weapons. It could define general rules on the basis of the agreements made and would thus exercise a global monitoring function. This would of course imply

exemplary conduct by the members of the Security Council, especially its permanent members.[9]

Conclusion

A characteristic feature of the French strategic export control system is its regulatory disparity. At a time when interest in disarmament is again strong and when international trends are rapidly evolving, it seems inadequate despite its relative effectiveness. Consideration is therefore being given to these matters at the relevant governmental levels. However, behind the first steps of adjustment and the policy statements, one senses clearly that the French authorities are still groping for a new model to replace the machinery worked out during the cold-war and post-war periods. The prospect of a Europeanization of some of these controls, or, at any rate, their foundations (product lists, common evaluation criteria) might offer a path for medium-term progress. One year before the final establishment of a single European market, the trade in strategic products, to which the Treaty of Rome is in principle not directly applicable, can no longer remain completely outside Europe's movement towards economic and political integration.

Notes

1 Article 2, paragraph 3, of the *décret-loi* (decree-law) of 18 April 1939.
2 Article 13, paragraph 1, of the *décret-loi* of 18 April 1939.
3 Article 12 of the *décret-loi* of 18 April 1939.
4 *Canard Enchaîné* of 10 April 1991 and *Le Monde* of 18 April 1991.
5 Patrick Mercillon, "L'industrie d'armement" in *L'esprit de défense*, edited by Jacques Robert (Paris, Economica, 1987).
6 The latest of which appeared in the issue of 29 November 1990 of the *Journal Officiel*, with an update on 21 December 1990.
7 Notice to Exporters, published in the *Journal Officiel* of 10 November 1990.
8 EEC Regulation of 20 February 1989.
9 A/46/212-S22667.

The Control of Arms Exports in the Federal Republic of Germany

Andreas Weitbrecht

The participation of German companies in the development and production of weapons and in the construction of weapons factories abroad, most notably in the Libyan Arab Jamahiriya and Iraq, has attracted a great deal of attention from the international public. In response, the Federal Government has enacted numerous legislative measures designed to strengthen German export controls. The basic outline of the law has, however, remained untouched. This article gives an overview of the political and legal regime applicable to the export of arms from the Federal Republic of Germany, reflecting developments up to October 1991.

Fundamental to the German law of export controls is the distinction between military weapons, on the one hand, and industrial equipment that is of potential military and strategic significance (dual-use goods), on the other. Tight restrictions are imposed on the export of military weapons, while a liberal approach governs the export of dual-use goods.

Military Weapons

The majority of German exports of arms are destined to countries belonging to the North Atlantic Treaty

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Organization (NATO) as part of overall cooperation within the alliance. As far as exports to the third world are concerned, German exports of major weapons are relatively insignificant, compared to those of the Soviet Union or Western Powers.[1] During the five-year period from 1985 through 1989, German exports of major weapons to the third world averaged $0.4 billion per year.[2] During the same five-year period, exports from the Soviet Union to the third world amounted to an average of more than $9 billion per year. The equivalent figures for the United States, France and the United Kingdom were, respectively, $4.3 billion, $2.5 billion and $1.1 billion.[3] (Figures are in United States dollars.)

Overall, the exports of weapons (including to NATO countries) constitute a mere 0.1 per cent of the German gross national product[4] and 0.3 per cent of total exports. Thus, the Federal Republic of Germany, despite being a major industrial Power, is not a major exporter of weapons.

Constitutional and Statutory Framework

These economic figures result from an extremely restrictive legal regime. In order to prevent a recurrence of the events that led to World War II, the German Constitution, enacted in 1949, prohibits military aggression and "offensive war"(*Angriffskrieg*—article 26, paragraph 1).

According to article 26, paragraph 2, of the Constitution, the production, transportation and selling of arms which can be used in armed conflicts requires a licence from the Federal Government.

Article 26 of the German Constitution reflects the basic commitment by the Federal Republic of Germany not to contribute to armed conflicts in any way; this constitutional provision is the cornerstone of Germany's restrictive policy towards the export of arms.[5]

The Control of Military Weapons Act (*Kriegswaffenkontrollgesetz*)[6] implements the constitutional provi-

sion of article 26, paragraph 2, of the Constitution. While the Control of Military Weapons Act covers the production, sale and export of military weapons, the Foreign Trade and Payments Act (*Aussenwirtschaftsgesetz*)[7] and the Foreign Trade and Payments Regulation (*Aussenwirtschaftsverordnung*)[8] focus primarily on dual-use goods. However, the Foreign Trade and Payments Act and the Foreign Trade and Payments Regulation also extend to military weapons, in effect subjecting the export of military weapons to a dual requirement of licensing.

Principles for Arms Exports, 1982

In 1982, under the then existing coalition led by the Social Democratic Party (SPD), the Federal Cabinet laid down principles for the licensing of arms exports.[9] These principles continue to govern the licensing of arms exports today.

The principles distinguish between exports of weapons to NATO countries and exports to the rest of the world:

Export to and Cooperation with NATO Countries

It is presumed that the export of arms to NATO countries will generally serve to strengthen the defensive capabilities of the Western Alliance. Exports are, in principle, not to be restricted. However, the German Government must be satisfied that the exported goods will indeed remain in the country of purchase.

The same principles apply to agreements involving cooperation and co-production among German companies and companies from other NATO countries.

Export to Non-NATO Countries

The export of military weapons to non-NATO countries will not be permitted unless either

—general exceptions are made based on political considerations

or

—in the case of a specific application, it is considered that the vital interests of the Federal Republic of Germany would be furthered by granting the requested licence. Such vital interests are interests of either foreign policy or national security, including the interests of NATO.

The first alternative appears not to have played a major role in the past.

Under no circumstances must the exports of weapons to non-NATO countries increase existing tensions. Therefore, exports to countries where there is a danger of the outbreak of hostilities will, in principle, not be permitted. Furthermore, there must be sufficient assurance that the weapons exported will serve defensive rather than aggressive purposes. To the extent possible, given the restrictions imposed by public international law, the final destination of goods will be strictly controlled.

As expressly stated, considerations of employment policy will not determine the decision.

Dual-Use Products

While the export of military weapons can be controlled reasonably well, there are far greater practical, legal and administrative problems involved in controlling the export of dual-use products. These products form a large proportion of the approximately 18 million deliveries of exports that cross the German border every year. The final destination of these goods is often far from clear, and even more difficult to control.

Constitutional and Statutory Framework

The German Constitution, in article 12 and in article 2, paragraph 1, guarantees the private freedom to pursue economic activity. While these fundamental guarantees—as almost any rule of national law—are primarily designed

to govern existing domestic situations, the Federal Constitutional Court has applied them in cases where governmental action was taken to regulate contact abroad.[10]

These fundamental rights are, however, not without limitation. The State may, either by statute or on the basis of statutory authority, enact measures which limit the exercise of these fundamental rights, provided the measures taken by the State are supported by public policy. Such public policy can be derived from a constitutional mandate such as article 26, paragraph 2; it can also be based upon a political value judgement made by the legislative branch of Government.

The core of German export control law is contained in the Foreign Trade and Payments Act (*Aussenwirtschaftsgesetz*)[11] and the Foreign Trade and Payments Regulation (*Aussenwirtschaftsverordnung*).[12] The Foreign Trade and Payments Act provides the basic statutory authority for restrictions placed upon private persons and enterprises in their economic dealings with persons and enterprises in foreign countries and with foreign countries. The Foreign Trade and Payments Regulation is enacted by the executive branch, that is, the Federal Cabinet, based upon authorization contained in the Act.

The Shifting Focus of Export Controls

In Germany, export controls have traditionally been targeted at the communist countries on the basis of consensus reached by Western Powers within the institutional framework of COCOM (Coordinating Committee of Western countries on export controls). Recent political developments in Eastern Europe have led to a considerable liberalization of COCOM rules. COCOM is presently working on a further reduction of controls.

This development has had repercussions on the control of exports to countries other than those belonging to the Eastern bloc, as the restrictions on the export of stra-

tegic goods to them has also acted as a de facto control of exports to other countries. Controls targeted at the Eastern bloc have regulated exports to almost all other countries in order to guard against circumvention of COCOM rules by funnelling deliveries to the Eastern bloc through a third country. The loosening of COCOM restrictions has automatically loosened the concomitant export controls to third countries.

At the same time, the need to control exports to non-communist countries, especially countries of the third world, has become even greater, as evidenced by the Rhabta affair (see below) or the contribution by German firms and scientists to the military build-up of Iraq.

The Reform of 1989-1991

The illegal construction of a "fertilizer plant"—widely recognized as a facility to produce poisonous gas—in Rhabta, Libya by a German firm, discovered in early 1989, caused the German Government to undertake a comprehensive overhaul of the legal and administrative regime governing and controlling exports.[13] The bulk of the reform of 1989 and 1990 concerns dual-use goods and technologies.

Overview

The most significant features of the reform include:

—The strengthening of provisions of the Military Weapons Control Act,

—The establishment of a list of countries to which special controls would apply,

—The adoption by the Federal Cabinet of principles for assessing the reliability of exporters.

In February 1991, the Federal Ministers of Economics proposed a final ten-point package that has stirred public controversy and remains pending in Parliament.[14]

Specific Measures

New controls were introduced targeting specific countries as destinations for exports. Examples are the "Lex Rhabta", banning exports destined for a poison gas plant in Libya and exports for an in-flight refuelling project, also in Libya.[15] Other controls are specifically targeted at the Syrian Arab Republic, Lebanon and Libya, covering, for example, the export and transit of such seemingly innocent products as hang gliders, which can be used for terrorist purposes,[16] and the export of police patrol boats.[17] Even before the United Nations embargo, licences had been required for certain exports to Iraq, connected with the country's arms programme, for example, for the super-gun project,[18] helicopters, heavy presses and forges and certain parts of a gas centrifuge.[19]

These experiences have made it clear that the Government requires an instrument with which it can react on an ad hoc basis and within hours to address a certain and limited problem concerning a specific country. A new provision giving the Minister of Economics the necessary powers has been proposed (*Einzelermächtigung*).[20]

In reacting to the shifting focus of export controls, the Federal Government created a new list of countries to which all future controls outside or in place of COCOM would refer. This list, Country List H,[21] presently contains 54 countries.[22] The introduction of Country List H makes the Federal Republic of Germany the first country to take this step towards building a comprehensive export control outside the East-West context. Inclusion in the list is based on not always fully verifiable indications of possibly dangerous arms projects or the passing on of technologies to third countries. It does not mean that exports to these countries cannot take place in all. It triggers, however, a thorough examination of applications for export licences for these countries.

There were a great number of further amendments, including the strengthening of provisions of criminal law and provisions directed at German nationals not resident in Germany, which are too numerous to be described here.[23]

Outlook: Export Controls and the Single European Market

The European Community is working towards achieving a single market, which will eventually bring about the abolition of all physical checks at the border between member States. While military weapons might continue to fall under article 223 of the Treaty of Rome, which excludes defence matters from the scope of the Treaty, the lack of border checks will make enforcement of the German Military Weapons Control Act more difficult.

As concerns dual-use goods, it will be necessary to define a common EEC standard for the export of such goods to non-member States.

Notes

1 The following figures are based upon statistics compiled by the Stockholm International Peace Research Institute. See Wulf, "Specific issues of conversion: industries and trade", *Disarmament: A Periodic Review by the United Nations*, vol. XIV, No. 1, 1991, pp. 95-123.

2 All figures assume constant (1985) prices.

3 See note 1.

4 The gross national product of the Federal Republic of Germany, during 1990, totalled DM 2.428,0 billion (not including the former German Democratic Republic). This translates in terms of 1985 prices into approximately $1,000 billion. Exports of weapons to NATO countries averaged $0.6 billion per year.

5 See the Political Principles of the Federal Cabinet for the Export of Arms and Other Military Equipment of 28 April 1982, discussed below, reprinted in *Bundesministerium für Wirtschaft, Dokumentation: Die Reform von Aussenwirtschaftsrecht und -kontrolle*, March 1991, pp. 34 and ff.

6 *Gesetz über die Kontrolle von Kriegswaffen* of 20 April 1961, (*Bundesgesetzblatt* I 440), as amended.

7 *Aussenwirtschaftsgesetz* of 28 April 1961, *Bundesgesetzblatt* I 481, as amended. For the text currently in force, see Hocke-Berwald-Maurer, *Aussenwirtschaftsrecht*.

8 *Aussenwirtschaftsverordnung* of 18 December 1986, *Bundesgesetzblatt* I to 2671. The *Aussenwirtschaftsverordnung* was first enacted in 1961, parallel to the *Aussenwirtschaftsgesetz*. In view of the numerous amendments, a consolidated text was officially published on 18 December 1986. For the text currently in force, see Hocke-Berwald-Maurer.

9 Political Principles of the Federal Cabinet of the Export of Arms and other Military Equipment (see footnote 5).

10 Thus these fundamental rights extend to transnational economic activities such as the export of goods and technology.

11 See note 7.

12 See note 8.

13 See: Federal Ministry of Economics, *The Reform of Foreign Trade Legislation and Controls, Status: March 1991*, BMWi Documentation No. 311 (excerpts available in English). The following description of the reform is partially based on this official publication.

14 See *Bundestagsdrucksache* 12/899, *Entwurf eines Gesetzes zur Änderung des Aussenwirtschaftsgesetzes, des Strafgesetzbuches und anderer Gesetze*.

15 The 3rd regulation, 22 March 1989, amending the Foreign Trade and Payments Regulation, and the 4th regulation, 21 June 1989, amending the Foreign Trade and Payments Regulation.

16 The 64th regulation, 18 August 1989, amending the Export Control List, and the 6th regulation, 20 March 1990, amending the Foreign Trade and Payments Regulation.

17 The 71st regulation, 27 November 1990, amending the Export Control List.

18 The 7th regulation, 21 June 1990, amending the Foreign Trade and Payments Regulation.

19 The 69th, 72nd and 73rd regulations amending the Export Control List, dated 7 August 1990, 12 December 1990 and 18 December 1990 respectively.

20 See note 14.

21 The 12th regulation, 12 December 1990, amending the Foreign Trade and Payments Regulation.

22 Fourteen of these countries are included only because they have not signed the nuclear non-proliferation Treaty. With respect to these countries, the special controls are limited to nuclear-related goods and technologies.

23 See the documentation prepared by the Federal Ministry of Economics, referenced in footnote 13.

Natural Resources and Conflict: The Need for Confidence-building and Crisis Management

Environment and Conflict: New Principles for Environmental Conduct

Nazli Choucri

Introduction: Environment and Conflict

The crucial connections between environment and conflict among nations continue to escape political scrutiny. The international community as yet pays little attention to such connections, thereby missing the opportunity for both preventive measures and effective responses to managing the consequences after the outbreak of war. Such acute international myopia serves neither global welfare nor efforts to design a better world for the twenty-first century. This article addresses some crucial connections. However compelling they may be, facts alone are seldom enough. Facts must be interpreted and decisions based on coherent analysis; only then can we consider the merits of alternative policy options—and choose among the best.

By definition, conflict damages natural environments; ecological costs are always incurred; degradation leads to more degradation and invariably to environmental damage—and the vicious cycle can go on and on. Environmental damage in the Middle East following the Gulf war is among the most compelling cases to date.

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Environment in the Gulf War

By some accident of history, the Gulf war erupted one year before the international Conference on Environment and Development. It is nearly impossible for the industrial States and the international coalition against Iraq to ignore that event or to expect that the Conference, in turn, will ignore one of the most environmentally threatening multinational confrontations since World War II.

Three kinds of environmental damage are already interacting to produce a dangerous ecological situation, which may have serious political consequences. First is the environmental degradation in the Gulf and in the Middle East related to "normal" development—industrialization and other things we need and take for granted and which have nothing to do with war. This degradation is already extensive; by some counts the region's ecological budget already runs a large deficit. Second are the effects of the large-scale military presence in the Gulf—the pre-war preparations before the conduct of Desert Storm. And third are the ecological consequences of military engagement. The oil spill early on overshadowed the subsequent dangers of blazing oilfields.

The problem is this: any one of these sources of ecological damage alone poses remarkable problems—for which a bill must be paid—but taken together, the challenges for environmental management could well be daunting. At issue is less the dollar cost of clean-up—since no one has any idea what that could possibly be—than two other pressing difficulties. The first is to ascertain the scale and scope of these combined environmental effects, the second is to make sure that environmental damage does not turn into a wild card that could play havoc with post-war strategies for security, reconstruction, and development in the region. Untangling which damages are due to which causes and who is responsible for which part of the damage is a difficult job, perhaps even an impossible one.

The fact is that industrial countries and the international coalition will not be able to ignore the environmental costs of the Gulf war forever. A tentative strategy for management, however incomplete in scale and scope, is surely better than no strategy at all. Encountering ecological dislocation without assuming some responsibility for ecological repair is no longer sound politics. It sells nowhere, not even in the Middle East. Thus, for the crude *realpolitik* of self-interest, a strategy for managing the environmental costs of the Gulf war is a necessity, not a luxury.

The causes of damage—the normal causes and those tied to war preparation and the aftermath of war—are all distinct, and each has a unique ecological profile. Environmental degradation in the region carries a varied and multifaceted portfolio, and that portfolio looks roughly as follows:

Normal Development

Under normal conditions the Gulf and the Mediterranean are among the most thoroughly polluted regions in the world. Even a rough accounting of the types of pollution shows the range of dislocations. Business as usual, especially that designed as successful economic growth, has already had high environmental costs. Nearly one fourth of the world's oil flows through the Mediterranean. The region is normally vulnerable; spills are a part of the standard procedures for loading and unloading operations in this industry. Oil is particularly tricky to deal with because of accidents and the tankers that rid themselves of ballast waters at sea to avoid paying for access to facilities which allow oily ballast to be off-loaded. Moreover, we have no substitutes for oil. (Intentional, strategic spills are treated below.)

Unrelated to oil is a wide inventory of industrial pollutants. There are domestic wastes, 90 per cent of which

are untreated. There are metal breakages tied to industrial output, which seep into rivers and even into the atmosphere, as in the case of chromium and mercury. Then there are organic pollutants, such as chemicals like polychlorinated biphenyls (PCBs), or mineral oils from industrial processing or pesticides from agricultural practices—all of which are slow to decay. Also critical are the set of pollutants that turn into poison (e.g., sewage contaminating seafood), reminding us that not all pollution is created equal nor remains equal in its effects.

Beyond these facts there is good news and bad news. The good news is that the countries of this region have recognized the problem. The Med Plan of 1976 was a salient political issue. The bad news is that there never has been an environmental movement of any kind in the Gulf, nor have there been any serious restraints of an environmental nature on oil operations.

Preparations for War

Preparations for war brought a large-scale military presence to that subregion; it brought with it a wide range of novel sources of dislocation. A simple accounting looks like this. North and north-east Saudi Arabia, where most of the troops were massed, was thinly populated, having few permanent settlers. With war preparations, it suddenly had to host about half a million soldiers, together with thousands of tons of equipment and an arms arsenal. All of this amounted to a full-blown instant population boom—of the most ecologically damaging kind. A population of this size generates extensive wastes (both sewage and solids). Even if the estimates of the Environmental Protection Agency (EPA) for per capita sewage in the United States were cut by half, the sewage produced by the military force would be estimated at a minimum of 10-12 million gallons per day. There was also garbage, in terms of plastic water bottles and so forth, that needed to be

disposed of. No analysis of the problem of waste was made nor was a strategy for waste disposal in the desert devised. The military had some sort of collection system in place, but follow-up is unclear. Liquid sewage migrated and continues to migrate through sandy soil. It could contaminate Saudi aquifers—and water remains a scarce resource in Saudi Arabia.

While in the United States there are rules and regulations on hazardous wastes and waste disposal, they were not enforced in the Gulf. The troops in the Gulf were using a wide array of toxic paints and solvents; the decontaminating substance for chemical weapons in itself may be highly toxic. The troops themselves may have been at risk. All this may become clear later on. Further, the "live fire" exercises in the desert were not neutral in terms of their environmental effects. These, too, may have longer-term effects.

War Damage

Then there is the war damage—to the environment and to populations whose dislocation would in turn put stress on neighbouring environments. Among the environmental consequences of the Gulf war, five have become particularly salient:

1 Intentional damage to pipelines, terminals or related facilities created oil spills, ripple effects, and potential damage to ecosystems. This damage has also threatened crucial life-supporting facilities, such as the desalinization plants in Saudi Arabia;

2 The setting on fire of Kuwaiti oilfields created unprecedented damage, far greater in scale and scope than in any fields elsewhere in the world, at any time; the ecological consequences are difficult to estimate;

3 Blazing on this scale produces black rain, a combination of soot and smoke, which could affect agriculture and growing seasons;

4 Water pollution occurred, owing to damage to oilfields and oil platforms;

5 Extensive damage to refineries was also environmentally deleterious.

The possibility of chemical warfare was never ruled out at any stage of the war, nor can that prospect be ruled out in the future. The potential use of chemicals and their dispersion depend on temperature and prevailing winds; the contamination of rivers and reservoirs can seldom be avoided. Of uncertain dimensions is the problem of unexploded ordnance. About one half a million mines in Kuwait, plus bombs in Iraq and shells in both countries, punctuate an already damaged landscape. Along with these other factors, unexploded ordnance continues to create an environmental management problem of almost unimaginable proportions. And the list goes on. While these impacts are largely regional in scope, over the longer run there is some probability that they could be global as well, since it is difficult to prevent the effects from spreading.

Relatively little attention has been paid to environmental degradation due to population dislocations. Refugees, however unfortunate, seldom have a benign effect on the natural environment, thereby compounding human misfortune.

The combination of normal sources of environmental degradation, damage due to military presence, and damage resulting from war creates environmental costs whose scale cannot remain hidden for long. Environmental factors will not be marginal to the task of reconstruction. Environmental damage must be confronted, and a diplomatic strategy must be shaped.

Next Steps

By any count, the region's development has been built on the basis of highly toxic, highly polluting, and highly

inefficient technologies and production processes. Inefficiencies are legendary, and we are running out of ideas about how to fix them. What is even more to the point is that we do not know where to begin fixing what it is that must be fixed. Tragic though it is, the destruction of the physical infrastructure through war may provide an opportunity for reconstruction on a less toxic or ecologically damaging basis. There are no principles to guide investments in "non-toxic development". It would be best to rethink the development process—hardly a priority at this point in time. The reconstruction of Kuwait (and eventually Iraq) could include not only environmental restoration, but also the re-engineering of the oil and gas processing facilities and the materials manufacturing facilities to reduce the toxicities inherent in industrial development.

At least an outline of some new principles for responsible reconstruction should be drawn up. We know that there must be both robust economics and solid diplomacy to improve prospects for success. The challenges on the economic and technical sides are rather clear. These include (*a*) valuating environmental assets; (*b*) valuating environmental by-products of investments; (*c*) creating financial incentives for new technologies (solar cells for household use); (*d*) legitimizing a conception of size and scale that does not reward size alone but stresses efficiency; (*e*) placing some responsibility for environmental audits of investment on the side of the suppliers; (*f*) creating new financial instruments and arrangements to encourage responsible reconstruction, such as debt for nature; environment for development; etc.; and (*g*) establishing equity participation by the private sector in environmental "bonds".

There is more, of course, but this is the type of new thinking needed.

The politics involved in addressing this reconstruction dilemma are also stark, and difficult questions are sure

to arise. For example, who is responsible for which piece of the damage? Are there statutes of limitation on accountability for ecological dislocations? What about structural damage resulting from proximity to the war zone rather than from direct hits? What about errors of strategy, or intent or performance? What about accidents owing to failure, that is, damage that would not occur if equipment was "operating properly"?

The prospects are legion—truly a boon to the legal profession and an ecologist's nightmare. Now the economists are called upon to give us new tools and better means of evaluation, and to help us "get it right" this time. And then there are the diplomatic imperatives. The imperative of managing environmental damage—politically—in the Gulf is already apparent.

Daunting Diplomacy

The diplomacy required for managing environmental degradation in the aftermath of the Gulf war is daunting. Unlike Vietnam, no one will be able to walk away from ecological damage in the Gulf—either in good conscience or in political expedience. We cannot extricate ourselves from these realities, some of which are rather uncomfortable, not to mention costly. Five components make up a plausible diplomatic package—one that could actually sell on Wall Street, Madison Avenue, and in Washington, D.C.—a winning combination. These five components constitute a minimum of what must be done if the United States–led coalition is to manage the Gulf environment in the post-war era:

1 There must be a joint clean-up effort—under United States leadership—to reduce the most toxic damage already incurred;

2 The allies may find it diplomatically tactless to go to the 1992 Conference on Environment and Development

without a strategy for environmental management in the Gulf in hand;

3 The parties must begin to frame an international partnership with nature—and issue shares against assets—for the Gulf's environmental future;

4 Corporate incentives for cleaner reconstruction must be devised, obviously some creative tax benefits;

5 Finally, a strategy for clean-up at the grass-roots level, mobilizing people-power, would help show that democracy matters.

Why must this be done? Why should it be taken seriously?

The international coalition against Iraq has won—and it cannot ignore the reconstruction challenge or avoid confronting the environmental damage. The consequences of military action have simply been too extensive and they remain too visible to ignore.

Politically, there is also the need to retain the goodwill of the people in the region—300 million persons in the Middle East as a whole. Their goodwill is needed to ensure some political stability beyond the immediate crisis of war. In other words, a strategy for environmental reconstruction and protection is good, even necessary, politics. No one can walk away from environmental damage in the Gulf nor from the consequences of military engagement—regardless of who is responsible or how the damage was inflicted—or how the war was brought to an end.

Environmental Management after War

The politics of environmental management are complex, raising the same questions as those raised with reference to reconstruction. The environmental reconstruction of the Middle East will not take place in a *laissez-faire* atmosphere. National Governments, international agencies and local groups will all feature prominently in both

planning and execution. If anything, it is clear that business will be constrained. The invisible hand of the competitive market may be replaced by the hand of a well-meaning but possibly misguided international community seeking to make amends for large-scale destruction.

Four steps can be taken to mitigate environmental consequences of conflict among nations, and important steps have already been made in each case. These are: (*a*) better data, (*b*) better accounting, (*c*) better analysis, and (*d*) better responses.

Already both national agencies and international institutions are beginning to consider the need for better data (on resources and on availability and access). Institutions like the World Resources Institute are developing guidelines for an improved collection of information.

Providing better accounting is undoubtedly difficult. Three sets of accounts must be improved: (*a*) valuation of natural assets and resources in national accounts; (*b*) valuation of the true resource and environmental costs incurred in preparations for conflict (i.e., military expenditures, investments, alterations, production and storage of war-related materials, such as nuclear devices, "normal" ordnance, etc.); and (*c*) valuation of both the resource and the environmental consequences of war (in terms of damage to humans, ecological assets, raw material bases, and natural resources).

Facts and figures are not enough; good interpretation and good analysis are needed. This can be done only in the context of interdisciplinary and international modes of investigation.

Better policy response is essential everywhere. This means that individual countries must make an effort to foster resource/security analysis within the normal governmental channels so that the crucial connections identified earlier and the elements of the vicious cycle are taken into account in security assessments and in deliberations on

national priorities—and the consequences of pursuing those priorities.

Principles of Environmental Conduct

Conflict and violence are, regrettably, facts of international life, and so are resource conflicts and mounting environmental degradation. To reduce both the scale and the scope of environmental damage in war, three principles of action must be considered by the international community to guide conduct in the twenty-first century.

1 Managing environmental insecurities;
2 Establishing mechanisms for early warning;
3 Institutionalizing codes of conduct after war.

Implementing principle 1 would entail establishing an international forum for discussion of strategies for repairing environments following war.

Implementing principle 2 would mean establishing early warning mechanisms to alert both national authorities and the international community of the potentials for conflict owing to resource constraints (depletion or impediments to access).

Implementing principle 3 would mean adopting a code of conduct after war for ecological reconstitution and resource rebuilding. Regardless of the political merits of or demands made in a violent conflict, the international community must protect the global environment. Adoption of Principle 3 would be a step in this direction.

To the extent that we can look beyond the United Nations Conference on Environment and Development to the next century, we can provide future generations with some basic principles of environmental conduct which they must elaborate as future conditions unfold. An important step in this direction is decision 16/11, entitled "Military conflicts and the environment", adopted by the Governing Council of the United Nations Environment Programme

on 31 May 1991. It could even provide the basis for crucial precedents in the formation of a code of conduct on environment during war.

Earlier generations have given us the ideas we now believe in regarding good governance in national and international life. Among these are constitutionality, participation, representation, equity, freedom, human rights, basic needs, due process—and the list goes on. We must bequeath to future generations principles of management for reducing environmental degradation in conflict situations. This is only fair and just.

Environmental Sources of Conflict in the South Asian Subcontinent

Shaukat Hassan

Preoccupation with environmental issues is now a world-wide phenomenon and it has reached the centre stage of national politics in many countries. While the industrialized countries possess the infrastructure and the resources to cope with the effects of environmental change, most underdeveloped countries do not, a fact which makes them vulnerable to environmental stress and sensitive to environmental policy issues. The task here is threefold: first, to discuss the nature of environmental stress and its role in inter-State conflict; second, to examine the nature of resource rivalry and its contribution to inter-State conflict; and third, to explore ways in which environment-related conflicts can be resolved and prevented. The focus of this essay is the South Asian subcontinent (comprising Bhutan, Bangladesh, India, Maldives, Nepal, Pakistan and Sri Lanka), an environmentally ravaged region with a population of 1.13 billion, or one quarter of mankind.

Environmental Stress

South Asia is a region of high environmental stress caused by a variety of environmental problems, such as a huge population, deforestation, soil erosion and siltation, land degradation, floods, droughts, storms, earthquakes,

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sea-level rise and pollution. Of these issues, at least three have complicated current regional political relations.

Population

The demographic picture is particularly worrisome. In this already over-populated region, another 500 million people are likely to be added by the year 2010. The regional birth rate (37 per 1,000) is two and a half times the death rate (14.43 per 1,000). Despite fertility control measures, the annual population growth rate is still quite high, varying from 1.5 per cent in Sri Lanka to 3.7 per cent in Maldives. The great majority live in rural areas, but the rate of urban growth is on the rise.

These factors have thrown off the balance between the region's population and its environmental capacities. The low resource-to-population ratio suggests that in order for the population to survive, there will be a general tendency to exploit resources beyond renewable limits. The environmental stress caused by the population-resource imbalance already manifests itself in various ways.

First, increasing demands on water, agricultural lands, forests and fisheries have deteriorated or diminished these resources, setting in motion a continuous stream of ecological refugees bound for urban areas. This is causing highly skewed demographic redistribution, particularly serious in Nepal, Bangladesh and the Maldives, a situation that not only makes it difficult for the affected Governments to plan and manage national resource allocations, but also creates administrative dilemmas that subcontinental bureaucracies, lacking clear and consistent political direction, are ill-equipped to handle. The basic services available in the urban centres are unable to cope with the additional burdens placed on them by the environmental refugees, and this system-overload ignites conflict over jobs and access to urban facilities and resources. Recent experiences in India and Nepal also suggest that political parties

find it electorally rewarding to appeal to the deprived millions who constitute the urban slums of South Asia.[1] The disparity in infrastructural investment and growth caused by unplanned population redistribution only exacerbates social alienation, ethnic tension and political conflict.

Second, as the physical environment deteriorates in South Asia owing to increases in the net number of people and in human activity, food insecurity also increases. The burden of industrialization is borne by agriculture, and as food crops yield to cash crops to finance industrialization, poverty expands. Food insecurity affects the national stress level in a variety of ways.

1 Starvation and famine, not infrequent in the region, are sources of civil unrest and contribute to various types of instability.

2 Food insecurity can lead to the collapse of civilian rule. For example, the 1975 famine caused by inclement weather and the withholding of food-grain exports led to the collapse of democratic order in Bangladesh, which was recently restored after sixteen years of struggle.[2]

3 The import of food-grains causes a major drain on foreign currency reserves, which are often meagre to start with.

4 Dependence on food-grain imports increases a country's vulnerability to external influence; for example, Bangladesh's suspension of trade with Cuba in order to gain access to the United States grain market.

Third, environmental stress appears to have an unsettling effect on the domestic political dynamics. As affected communities vacate degraded habitats and transplant themselves in other localities, conflict often ensues between them and the host communities and local authorities. When such rivalries and conflicts become exacerbated, aggrieved communities turn to subnational ideolo-

gies, parties and symbols to fight for their way of life. Extraneous interest groups (such as political parties) also usurp environmental issues for their own gains.

Fourth, environmental stress can trigger policy responses from Governments which do not necessarily enhance national security. For example, huge numbers of people whose habitats were destroyed by recurring floods and storms have been settled over the years in the Chittagong Hill Tracts (CHT) in the southeastern part of Bangladesh; this has completely changed the ethnic balance in the region, creating fears among the native tribal people about the continued sanctity of their distinct society. The upshot has been an insurgency, with the insurgents finding sanctuary, training and arms in India. Thus, what was an internal response to rehabilitate an environmentally ravaged people became a transboundary issue affecting the security of, and worsening relations between, India and Bangladesh.

Also, Bhutan's concerns with ecological degradation in its southern provinces have been one reason for the expulsion of thousands of illegal immigrants from its territory. Many of those evicted, however, have joined up with the Gurkha separatist movement located just across the border, heightening the security concerns of Bhutan and India.

Population displacement across international borders owing to environmental stress has raised the level of tension between several countries in the region. Floods and droughts, which have caused periodic famines, and scarcity of agricultural land have propelled population movement from Bangladesh to India (Assam and Tripura) in search of food and income. Over the years, these migrants have come to be seen as alien land-grabbers and as a demographic, cultural and religious threat to the indigenous peoples. The sharp rise in the immigrant population of Assam and Tripura has reduced the political power of the

indigenous population, increased competition for jobs, depressed wages, and raised the level of social and economic tension. Political agitation and calls for, *inter alia*, deportation of immigrants have resulted in widespread riots, which, in 1980 in Tripura, became a movement for independence from India. The 1985 accord signed by Rajiv Gandhi and the leaders of the Assamese anti-foreigner agitation, which calls for the deportation of all who entered Assam after March 1971, has proven impossible to implement because Bangladesh has refused to accept those deported. India's subsequent plan to fence off certain sections of the Assam-Bangladesh border has been denounced by Bangladesh as an unfriendly gesture.

Further population displacement in the subcontinent is a real possibility, given its extreme vulnerability to environmental change. If the present trend of global warming remains unaltered, low-lying Maldives and Bangladesh will lose substantial amounts of territory to a rising sea, with harmful effects on freshwater aquifers, agricultural lands and inland fisheries. This will create millions of ecological refugees, for whom finding a home in the subcontinent will be a political nightmare. The alternative of mass migration to safer havens outside the subcontinent—most likely the countries of the North—may not be politically feasible either.

Deforestation

Forests are indispensable to South Asia for ecological, economic and social reasons, and therefore the high rate at which they are being destroyed today has caused general alarm. Deforestation affects most of the countries of the region, and in some cases it has contributed to bilateral tension and conflict as well.

Deforestation in the mountain region of Nepal continues to trigger migration to the lower lands of the Tarai bordering on India. Owing to Nepal's concerns over its

open border with India (enforced by a treaty), which it feels allows India to influence political attitudes and electoral outcomes in the economically and politically important Tarai region, government policy encourages controlled immigration to dilute the presence of Indian nationals. This concern, as well as that of ensuring that the Nepalese can benefit from the economic investments in the region, led the official Task Force on Migration (1983) to make 70 recommendations to the Nepalese Government, among which are the creation of a limited number of entry points along the border to regulate migration, the introduction of a registration and entry permit system to control the influx of Indian nationals, and compulsory work permits for Indian citizens as well.

The Indian Government considered many of these recommendations as a violation of the spirit and letter of the Indo-Nepalese friendship and trade treaties, and even as contravention of some of the provisions therein. The controversy dragged on, and in March 1987 when the treaties expired, India withdrew the trade transit facilities enjoyed by landlocked Nepal. The blockade severely affected Nepal's economy and reinforced the threat perceptions of the Nepalese. Indo-Nepalese relations were "normalized" after the interim Government acquiesced to New Delhi's insistence that the traditional open-border policy be preserved, and have improved further since June 1991, when the pro-Indian Nepali Congress Party came to power.

While deforestation has contributed to conflict within and between States, the reverse is also true in South Asia. To fight insurgency, several regional armies have deliberately deforested portions of their territories: the Indian Army in the eastern states during its fight against the Nagas and the Mizos; the Bangladesh Army in the CHT in its confrontation with the Chakmas; and the Sri Lankan Army in the Jaffna peninsula in its fight against the Tamil insurgents. The Afghan conflict has also led to extensive

deforestation in Pakistan along its border with Afghanistan, where the refugee settlements are located.

Floods

Floods are a recurrent phenomenon in the subcontinent, causing extensive damage each year. In India, flood-prone areas now exceed 45 million hectares. In Bhutan, river-bank erosion and inundation of agriculturally important valleys are a constant threat during the monsoon season. In Pakistan, monsoonal floods cause considerable damage to agriculture over vast areas. The floods of 1973 and 1976 destroyed 70 per cent of the standing agricultural crops, causing critical food shortages. Flash floods occur regularly in Nepal, causing shifts in river channels and creating new flood zones which displace people. Much more critical are the floods in Bangladesh, which normally submerge 18 per cent of the total land area each year, although severe floods can affect twice that area and nearly 60 per cent of the net cultivable land.

Thus floods have become a critical issue in South Asia because of their effects on food production, soil erosion, the security of homesteads and demographic distribution. It is a particularly sensitive issue in Bangladesh, which is the outlet for 54 rivers flowing from India. Bangladesh has long sought India's assistance to regulate their flows, without any success. During the 1988 floods—the worst in living memory—the President of Bangladesh obliquely blamed India for its unwillingness to join in a collective effort to solve the flood problem. The inability to control the flow in these rivers has reinforced the belief among Bangladeshi elites that India is out to destroy Bangladesh economically, and this perception continues to be a major obstacle to the normalization of relations with India.

Resource Rivalry

Three important resources which have precipitated destructive rivalry in the subcontinent are energy, water and land. While the first two are in ample supply, the last one is not; competition over their control and use has already led to several instances of both inter-State and intra-State conflict. The potential for future conflict is indeed high.

Energy

The drive for industrialization is bound to accelerate in the coming years, and so also is the need to tap clean and relatively inexpensive energy. The hydroelectric power potential of the subcontinent is enormous: 250,000 megawatts or about 4.5 per cent of the world's hydroelectric potential. This renewable energy, while theoretically accessible, is proving politically difficult to tap because of conflicting security perceptions in the region.

Almost two thirds of this potential lies within India, much of which is in the Arunachal Pradesh, the remote north-eastern state whose ownership is disputed by China. The Brahmaputra, which flows eastward on the Tibetan side of the Himalayas and turns sharply southward to enter India, can be intercepted by the Chinese to render hydroelectric projects in the Arunachal Pradesh useless. Thus as long as this dispute remains unresolved, it would be politically very difficult for India to tap this resource. In the west, the hydroelectric potential of the tributaries of the Indus river that flow through the Indian Punjab have already been developed, but New Delhi's control and distribution of Punjab's hydroelectricity to energy-hungry neighbouring states continues to fuel the Sikh separatist movement.

Developing Nepal's hydroelectric potential—83,000 megawatts—has also become politically difficult because Nepal's encounter with hydro-politics, which began in 1927

with the construction by the British of the Sarda barrage on the Mahakali, has proven to be unpalatable. The monarchy ceded water rights on the Mahakali to British India, which the Nepalese now regret. The Nepalese also lament that the subsequent Gandak and Kosi barrages built on Nepalese territory at the insistence of India provided electricity to India but floods to Nepal. India's insistence on water projects that are of doubtful benefit to Nepal (such as advocating a dam on the West Rapti which would flood agricultural land) and its efforts to veto Nepalese undertakings not to its liking (such as the "killing" of the Sitka irrigation project funded by the World Bank) have raised doubts in Nepal about India's good will.[3]

There are other concerns as well that affect both Nepalese and Indian interests. If Nepal develops its hydroelectric potential, much of it will have to be exported to India; but since it is a single-country buyer's market, and the power relation is asymmetrical, Nepal feels it will lose out in the negotiations with India. India, for its part, will have to balance Nepal's push to maximize electricity pricing against the desire of the consumer states for cheap electricity. Also, Nepal wishes to retain control over the management of water projects that would export power to India, but so too does India, which is unwilling to expose the northern Indian grid that supplies power to its industrial heartland to the vicissitudes of Nepalese politics.

Thus, while there is potentially ample energy to satisfy rising Indian needs, the tenor of political relations between India and Nepal continues to feed a potential dispute. This is also true in the case of India and Bangladesh. In the heyday of Indo-Bangladeshi friendship, in the early 1970s, there was an Indian proposal to supply power from India to western Bangladesh in exchange for power to the eastern Indian states from Bangladesh's eastern grid. Also, in the late 1970s the Bangladesh Government had floated the idea of exporting natural gas to

India, a project which would have, *inter alia*, restored the balance of payments with India. But both these proposals miscarried because of unfounded Bangladeshi fear of likely damage to its national interest. These examples demonstrate how resource control, exploitation and use are interlinked with perceptions of national security and the role this linkage plays in perpetuating international distrust and even dispute.

Water

The most explosive rivalry, however, is over the water resources of the region. Although there are hundreds of rivers in the subcontinent fed by Himalayan snow melt or monsoon rains, they are restricted to the north, much of their flow drains off to the Indian Ocean, and water availability is seasonal. Water disputes are frequent, the latest being that between the states of Karnataka and Tamil Nadu in India over the sharing of the waters of the Cauvery river. The 25 June 1991 directive of the Cauvery Water Tribunal to the Karnataka government to release a certain quantum of Cauvery waters to ensure their availability in the Mettur Reservoir of Tamil Nadu from June 1991 to May 1992 was rejected by Karnataka, triggering strikes in both states and calls to New Delhi to intervene. Subsequently, the Karnataka government promulgated an ordinance seeking to nullify the effects of the Tribunal's orders. At the time of writing, the Union Government awaits the Supreme Court's advice on the constitutional and legal implications of the ordinance. Meanwhile, a Union minister from Tamil Nadu has resigned; political agitation has spread throughout the two states; and there is pandemonium in Parliament every time the issue is discussed.

The issue of water sharing has played a destabilizing role in other parts of the Indian polity as well, jeopardizing the Union Government's relations with, for instance, Punjab, Assam and West Bengal—states whose interests affect

India's foreign policies *vis-à-vis* Pakistan and Bangladesh. In Punjab, the Beas, Sutlej and Ravi rivers provided it with ample water up to the time of independence, but subsequently canals were built to channel their waters to the states of Rajasthan and Haryana. This reduced Punjab's share of water, which is essential to its high-yield agriculture and to its generation of electricity to pump water from tubewells. The Union Government's control of Punjab's water resources and its allocation of over 60 per cent of the water and energy to Rajasthan and Haryana have fuelled political alienation, which feeds the Sikh secessionist movement in the state.

Similarly, the Union Government's plan to divert some of the waters of the Brahmaputra that flow through Assam into Bangladesh is viewed by the Assamese as an attempt by the Union Government to bring their state under its political and economic control. This plan cannot be implemented without addressing Assam's grievances, some of which affect Bangladesh's interests.

The increasing withdrawal of the waters of the Ganges to meet the expanding industrial and agricultural needs in northern India has already reduced the ability of the Ganges river to flush the silt in the Hoogly river on which is situated the port of Calcutta, essential to the economy of West Bengal. This issue continues to alienate the state of West Bengal from New Delhi, and has in the past been partially responsible for a number of extremist movements directed against the Indian polity.

In Pakistan a great deal of feuding has been going on between provinces over the waters of the Indus. Punjab, the most powerful province, has taken advantage of its upstream location to build dams and barrages across the Indus and to divert water for irrigation with little concern for the welfare of downstream Sind and Baluchistan, which feel cheated of their legitimate share. Meanwhile, the North-West Frontier Province, which lies upstream of

Punjab, has been denied the right to build its own diversions. Since Punjab is home to the Pakistan military, these provinces have little clout to deal with the inequitable distribution of the resources of the Indus. Although an agreement to share the Indus waters equitably was signed in April 1991, there is considerable doubt in the other provinces whether the Punjab-based government will implement the accord.

The sharing of the waters of the subcontinent has become an issue in inter-State relations as well. The first serious crisis developed just after the partition of India (1947). During the spring growing season in 1948, India abruptly cut off water supplies to what was then West Pakistan by diverting the waters of the Sutlej, Beas and Ravi rivers which flow into Pakistan, putting Pakistan's agricultural output for that year into jeopardy. The crisis did not worsen, however, because the armed forces of the two countries were still under British influence if not control, and the fact that the disputants were politically weak allowed for immediate World Bank intervention. Subsequent mediation by the World Bank led to the signing of the Indus Waters Treaty in the late 1950s.

But the Treaty has not prevented further flare-ups. Dispute over the use of the Indus waters partially contributed to the 1965 Indo-Pakistani war. It became an issue again in February 1985, when Pakistan learned that India had started constructing the Walur barrage on the Jhelum river in 1984. This was a violation of the Indus Treaty, which had given Pakistan exclusive rights to the waters of the Chenab, Jhelum and Indus, with similar Indian rights over the Beas, Sutlej and Ravi. Though the dispute is yet to be fully resolved, an inflexible stance *vis-à-vis* India has become a standard against which the patriotic credentials of the mainstream political forces are judged, thus complicating Pakistan's domestic politics immeasurably.

The waters of the Ganges and the Brahmaputra are not immune to bilateral tension either. The dispute over the Ganges waters started some four decades ago when India initiated a plan to divert much of the main flow of the Ganges from the Padma (the name given to the Ganges after it enters Bangladesh) to the Hoogly. The commissioning in April 1975 of the barrage across the Ganges at Farakka, about 18 kilometres west of the Indo-Bangladeshi border, reduced what Bangladesh considered to be its legitimate share of the Ganges waters. Although numerous meetings have taken place between the officials of the two countries, a permanent agreement on a formula for sharing is yet to materialize. The Bangladesh Government is unable to plan any long-term water resources utilization because India continues to refuse to guarantee a minimum flow in the Ganges, especially during the dry season when reduced flow threatens the agriculture, ecology and economy of one third of the territory of Bangladesh.

New Delhi's plans to build barrages across other major rivers that enter Bangladesh has only increased bilateral tension. Its plan to build a link canal to divert Brahmaputra waters into the Ganges conjures up worst-case security scenarios in Dhaka. Therefore, as long as India takes unilateral decisions regarding common water resources, bilateral tension will continue to fester.

Land

The population density in the subcontinent is one of the highest in the world, and increases every year. The large majority lives below the poverty line and is landless. The land being the principal and often the only asset, competition to acquire this scarce commodity, whether for homesteading, cropping or social reasons such as status or dowry, has become intense. The society's least privileged are the first victims in this struggle, and it is usually out of desperation that they leave their ancestral lands, often for

good. As already noted, the twin factors of population pressure in Bangladesh and land availability in the Indian border states have created a powerful impulse for the growing landless to emigrate from Bangladesh, thereby broadening the base for inter-State conflict.

So strong is the competition for land and other resources that India and Bangladesh almost went to war in 1981 over an island in the Bay of Bengal. The billions of tons of soil that have eroded each year from the Himalayas and along the lengths of the Ganges and the Brahmaputra rivers created the island, whose area varies between 12 km^2 at low tide and 2 km^2 at high tide. Both India and Bangladesh have laid claim to it, and neither is willing to compromise because sovereignty over the island will determine the maritime border between them and their claim over territorial waters and undersea resources. Although there have been other instances of inter-State conflict in the subcontinent over land, such as the 1965 Indo-Pakistani war over a patch of desert land (Rann of Kutch), the root of the present conflict appears to be mainly the environment.

What can be done

In regions of strife, confidence-building measures have often been the route to peace and stability; but the degree of success has usually depended on the willingness of the regional actors to adapt their thinking to the demands of the period. South Asia is ripe for such a change in its thinking.

For close to a billion people, security is measured in terms of their day-to-day struggle for survival, and the margins of tolerance are diminishing fast. As security becomes synonymous with well-being, it will be necessary to re-fashion existing institutions and build new ones to reflect current realities. Long-established norms, principles and procedures for both intra-State and inter-State con-

duct will have to be revised or supplanted by new ones. The subcontinent's intellectuals have had little influence over policy matters in the past; they should now constructively engage themselves as creators of concepts, strategies, and social and national parameters.

While nationalism is releasing creative energies in some parts of the world today, in South Asia it is an obstacle to reconciliation and bold departures. It has become necessary for the nations of the subcontinent to give up some of their sovereignty and power so that national resources can be pooled in a collective effort to address the region's environmental stresses. Environmental alliances must replace traditional defence alliances, and resources saved should be ploughed into environmental undertakings.

Policy Options

Environmental education is a must. The Governments of South Asia should launch major national educational efforts to deepen knowledge of the environment. This could be done by offering courses on national and regional environment in schools, colleges and universities; evening courses for adults; extension courses for administrators; citation for public activity in support of the environment; and regular radio and television programmes with environmental themes woven into them.

Reducing the high population growth rate is another must, and much the same strategy as above can be adopted here too. But two caveats are in order: current birth control strategies emphasize modern methods only; integrating them with traditional methods should significantly improve the success rate. Also, a singular deficiency in modern birth control strategies is their general insensitivity to individual cultures—a characteristic that should be corrected.

Poverty-elimination should receive a very high priority in government policy. This could involve various strat-

egies or a combination of them. The Food for Work Programme in Bangladesh as well as the Employment Guarantee Scheme in the Indian state of Maharashtra are notable anti-poverty programmes which provide employment to the rural poor, raise their income level, and thereby minimize their impact on the environment. The Grameen Bank scheme in Bangladesh, which has successfully devised a system of circulating credit among the rural poor, is another internationally acclaimed programme which could be implemented in other parts of the subcontinent; however, support from NGOs and governmental and international financial institutions would be essential. But perhaps the best anti-poverty scheme that is yet to be implemented universally in the subcontinent is land reform: redistribution of private ownership of land to the landless. This would significantly lower the poverty line, reduce environmental degradation, increase food production, improve the economy, and reduce political instability.

An important institution that can play a pivotal role in environmental stress management and crisis prevention in the subcontinent is the South Asian Association for Regional Cooperation (SAARC). It has recently sponsored a common regional environmental security approach by requiring each member State to prepare a national report on its environment, which would then form the basis for a regional report. Given its many successes, SAARC is in an ideal position to spearhead environmental legislation, help build institutions for regional cooperation, create expertise that the subcontinent lacks, and improve the general climate of mutual trust and accommodation. Given the extent and frequency of natural disasters in South Asia, SAARC should seriously consider creating a multinational "Green Force", whose transnational mandate would be to monitor environmental change, take measures to prevent environmental degradation, take preventive measures against natural calamities, and serve as a rapid deployment

force during and after environmental disasters to bring relief and rehabilitation to the affected. It is highly recommended that this "Green Force" be constituted by transferring contingents from each of the national armies; this would reduce force sizes, which is politically desirable, create a unit of highly skilled men and women requiring little additional training and financial investment, and plant the seeds of regional *élan* and camaraderie as the contingents work shoulder to shoulder, in some cases in stressful situations. It is this kind of cooperative endeavour unfettered by national allegiance that is necessary to reduce environmental stress and conflict in South Asia.

Notes

1 Sanjoy Hazarika, "Bangladesh and Northeast India: Migration, Land Pressure and Ethnic Conflict", paper presented in a workshop on environmental change, population displacement and acute conflict, Ottawa, 18-19 June 1991.

2 See Donald McHenry and Kai Bird, "Food bungle in Bangladesh", *Foreign Policy*, 27, Summer 1977, pp. 72-88; Rehman Sobhan, "Politics of food and famine in Bangladesh", *Economic and Political Weekly* (Bombay), 1 December 1979; Ben Crow, "US policies in Bangladesh: the making and the breaking of famine?", *The Journal of Social Studies* (Dhaka), No. 35, January 1987, p. 47.

3 Dipak Gyawali, "Troubled politics of Himalayan waters", *Himal* (Kathmandu), vol. 4, No. 2, May/June 1991, p. 6.

The Effects of Military Industrialization in Latin America

Augusto Varas

One of the main problems in achieving any regional balance of military forces at lower levels has been, and continues to be, the proliferation of hi-tech weapons systems and the growing capacity for less-developed countries to produce them indigenously. The military industrialization of Latin America and the development and production of missiles is a case in point. These developments have global as well as regional implications for security and disarmament measures. This linkage, and the difficulty in addressing the situation, was clearly expressed in a 1989 speech by United States President George Bush, who stated:

> "... the security challenges we face today do not come from the East alone. The emergence of regional powers is rapidly changing the strategic landscape ... in our own hemisphere, a growing number of nations are acquiring advanced and highly destructive capabilities—in some cases, weapons of mass destruction and the means to deliver them ... Our task is clear: we must curb the proliferation of advanced weaponry; we must check the aggressive ambitions of renegade regimes; and we must enhance the ability of our friends to defend themselves.

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We have not yet mastered the complex challenge. We and our allies must construct a common strategy for stability in the developing world."[1]

The proliferation of such weapons has caused alarm in the West, which the Iraqi invasion of Kuwait exacerbated. Yet, the West has been instrumental in creating the existing conditions. Much of the technology and know-how have been obtained from purchasing advanced weaponry directly, licensing the rights to produce the armaments domestically, and entering into joint research and production agreements, all with the assistance and collaboration of Western Governments and companies, although the West was by no means the only source available.

In the last two decades, developments in hi-tech weapons production have been swift. Regional security will be greatly destabilized if these developments are allowed to continue without regional control. Left unchecked, countries' capacities will continue to expand as they strive to acquire adequate defence. This legitimate objective creates an impetus which is not conducive to reduce force levels, which is how regional military balance is currently approached. Furthermore, Latin American countries will find it difficult to agree to reduce their technological capabilities in these areas if countries in the northern hemisphere continue to develop technologically and deploy these systems in the third world.

For these reasons, the issue of the transfer of hi-tech missiles to Latin America is part of an agenda concerning security and regional peace which should be considered by those wishing to establish regional security mechanisms to help create a new order of international peace.

In this article I shall analyse existing information concerning the development of some indigenous missile programmes in Argentina and Brazil—which have made the greatest strides in missile development—and identify

the international support which has made these developments possible.

Argentina

In the 1960s and 1970s, Argentina led the countries of the third world in the field of rocket research, initially conducted with support from the United States.[2] In 1974, the Instituto de Investigaciones Cientificas y Tecnicas de las Fuerzas Armadas (CITEFA) concluded work on its first successful missile project, the Mathogo anti-tank missile. The Mathogo incorporated foreign technology, and, given the missile's similarity to the Cobra missile, German technology was likely involved.[3] An air-to-surface missile, the Martin Pescador, entered production in the early 1980s.

Missile development accelerated after the 1982 war in the South Atlantic.[4] Some ballistic missile designs have been made public although none—as far as we know—is operational. The Argentine missile programme known as the Condor II has generated the most controversy and interest. The West's participation in, and reaction to, the project's development exemplify many of the dynamics and concerns which this paper addresses.

The Condor II surface-to-surface missile was apparently a development of a single-stage rocket called the Condor, which was tested in the early to mid-1980s. The Condor rocket was believed to have a 100-150 kilometre range. Several Western European defence contractors are believed to have assisted in the development of the Condor II missile and there is evidence that this cooperation continued even after some of these firms' countries joined the Missile Technology Control Regime.[5] Companies named include: the German firms Messerschmitt-Bolkow-Blohm and Man & Wegmann, the Italian firm SNIA-BPD—a subsidiary of Fiat—the French firm Sagem and the Swedish firm Bofors.

Further efforts to ensure the project's success led Argentina to enter into a joint agreement with Egypt to produce the missile, where it was known as the Badr 2000. Iraq is understood to have financed part of this project, and there is considerable speculation as to what Iraq demanded and was promised in return for its financial assistance.

Development of the Condor II missile was never completed, however. Under strong pressure from the United States, Egypt bowed out of the project in 1989, and in May 1991 Argentina announced measures to be undertaken which would ensure that the Condor II missile programme would not be resurrected.[6] (Although some reports had placed its range at 6,720-9,920 kilometres, there was a growing consensus that it had a range of no more than 800 kilometres.)

Over and above the ballistic missile programme, Argentina has been developing a family of remotely piloted vehicles (RPVs) based on the MQ-2 Bigúa RPV, which Argentina produces under a licence granted by the Italian company Meteor. The Bigúa may provide insights which could constitute the first stage in the development of a cruise missile.

Brazil

Brazil's missile programmes are more extensive and ambitious than Argentina's. During the 1970s the Centro Técnico Aeronáutico (CTA), later called the Centro Tecnológico Aeroespacial, undertook research and development of two missile designs: the MAS-1 Carcara air-to-surface-missile and the MAA-1 Piranha air-to-air-missile. Neither missile entered series production.[7] A missile which did enter series production was the Cobra anti-tank missile, which was built under a 1976 licence granted by the Federal Republic of Germany.

Brazilian missile programmes gained importance in the mid-1980s. Missile research is conducted by two cen-

tres: the Instituto de Actividades Espaciales (IEA) and the Centro Técnico Espacial (CTE). Production is undertaken by Avibras and Orbita and coordinated by a joint command of the Armed Forces.

In the early 1980s, Avibras began work on the SS-300, a ballistic missile with a range of 300 kilometres, similar to the Soviet Scud B. Longer-range missiles, designated the SS-600 and SS-1000 (with the numbers corresponding to the missile's range in kilometres), are also understood to be under development. Iraq is believed to have assisted in financing the project, which has yet to reach fruition.

Development of another series of ballistic missiles was undertaken in the latter half of the 1980s by Orbita. The missiles in this programme have been designated with the prefix MB/EE, but the numbers which precede the prefix do not necessarily correspond to the missile's planned range. The Libyan Arab Jamahiriya is believed to have participated in the programme's financing. Just as with the Avibras ballistic missiles, none of the planned Orbita missiles has progressed past the prototype stage into series production, and most are in various stages of research and development with no prototype having been constructed and tested.

Western military companies have been involved in many Brazilian missile programmes. The Cobra anti-tank missile built under a West German licence has already been mentioned. More recently, in 1987, British Aerospace joined the Brazilian firms Engesa and Orbita to develop a high-speed surface-to-air missile called the Thunderbolt or MSAAV, which was later suspended. The Italian firm Oto Melara is working with Orbita on developing an anti-tank missile called the MAF, which the Brazilian Army hopes to purchase under a modernization plan to replace their aging Cobras.

Other systems are being developed, such as the SM-70 Barracuda cruise missile. This missile and a variant also under development and known by the same name are both designed primarily to attack ships, but differ in their platforms: one is to be part of a mobile shoreline defence system, the other is to be ship-borne. The Barracuda programme, which was frozen by Avibras in 1988 when the Brazilian Navy and the Air Force announced that they did not have the money to carry out the programme,[8] apparently has been resurrected and development continues, providing resources can be allocated to the project—a questionable provision. The Barracuda could carry nuclear warheads and could be ready in the 1990s. The FOG-M (or MACMP), an anti-tank and anti-helicopter missile with a fibre optic guidance system and a maximum range of 10 kilometres, developed by Avibras in the late 1980s, has passed preliminary tests in Avibras's unit 3 in Lorena (185 kilometres north-east of Sao Paulo).[9]

Brazil's space programme, which appears to be peaceful in nature, nevertheless includes technologies and capabilities with military significance. For example, rockets used to power a space launch vehicle and put a satellite into orbit could just as easily power a missile carrying a more lethal payload. Making technologies available to developing countries for space programmes while simultaneously denying developing countries technologies for their missile programmes is a problem which does not lend itself to easy solutions. The Sonda series of sounding rockets (whose development has received West German assistance) has developed to the point where ranges approach 1,000 kilometres if used in a surface-to-surface mode. Technology from Sonda rocket development has helped Avibras develop military rockets and missiles. Avibras used the Sonda series as a basis for its Astros II artillery rockets.

Finally, we should mention the important role played by missile purchases in Brazil's industrial capacity, since

the maintenance of such missiles is subsequently done locally. In certain instances Brazil has succeeded in going beyond repair and rehabilitation to substantially upgrading existing systems. For example, Ozilio Silva, a high executive officer of Embraer, reported that the Navy would modernize its Seacat surface-to-air missiles, which had been acquired 15 years earlier from the United Kingdom and placed on Niteroi class frigates.

Budgetary and technological constraints, and not political will, are largely responsible for many of these projects not progressing beyond the research and development and prototype stages into series production.

A limited domestic market has led to Brazil concentrating on exporting its weaponry to recover research and development costs and ensure economies of scale to make Brazilian arms attractive to potential export customers and thereby also less expensive for the Brazilian defence forces. Brazil, very successful in penetrating the third world armoured vehicles market beginning in the mid-1970s, also had success in marketing more sophisticated weaponry, such as the Astros II multiple launch rocket system, during the 1980s.

When the Iran-Iraq war ended in 1988, Brazilian exports to the two antagonists (both directly and through third parties) declined precipitously. Bills remain unpaid and Brazil is not likely to see the monies any time soon. The international embargo of arms to Iraq means that Brazil has lost what was perhaps its biggest customer. Funding for its research programmes, which are believed to have relied heavily on Iraqi and Libyan support, has been severely cut back.[10]

In addition, the election of a democratic Government and the increasing economic and financial difficulties of Brazil during a time of economic restructuring produced, not the collapse, but a dramatic slowdown of these programmes.

Conclusion

As the foregoing analysis has shown, the development of Latin American missile technology, in its more advanced stages, is relatively new and has been accelerating rapidly. This has been made possible by the supply of technology by developed countries, those same countries that, having seen the effects that such technology transfers have had, for instance in the case of Iraq, are now trying to reverse the trend. However, those countries' own conduct in the international arena and Latin America's legitimate desire for a credible defence have created a situation in which controlling such development becomes problematic.

This paper has dealt primarily with questions concerning technical and financial aspects of the development of missile programmes. We have seen that fluctuations in funding—specifically, the recent financial difficulties experienced by Brazil and Argentina—have caused numerous missile programmes to be abandoned or substantially delayed. Political considerations and the desire for a strong national defence based, at least in part, on not falling behind other nations in the region militarily, has been treated as a constant. This may no longer be the case.

The establishment of a new regional security order at a lower level of forces may be achieved if the most recent trends evident in initiatives taken by some Latin American Governments continue. In fact, the Mendoza Accord of 5 September 1991 (see the Documentation section), in which Argentina, Brazil and Chile pledged not to produce or stockpile chemical and biological weapons, followed the Foz do Iguaçú Declaration of 28 November 1990[11] by Argentina and Brazil, in which they affirmed that they would not manufacture nuclear weapons and would enhance their cooperation in the peaceful uses of nuclear energy and redefine their relations *vis-à-vis* the International Atomic Energy Agency. The Mendoza agreement has since received the support of the Chilean President,

Patricio Aylwin. The Peruvian proposal of President Alberto Fujimori for a ban on weapons of mass destruction and a gradual process of arms limitation in Latin America has been another step in the same direction. All these developments give reason to believe that efforts to prevent hi-tech weapon proliferation in the region may meet with greater success than in the recent past.

However, in spite of governmental endeavours to reduce the level of forces in the region, the autonomy reached by military institutions in almost all Latin American countries introduces some uncertainties into this process.

Although this article is not concerned with policy recommendations, it must be noted that the developments in rocketry discussed above make it urgent to draw up a realistic agenda for the multilateral, balanced and simultaneous reduction of forces at the regional level.

In view of the limitations of Governments and the regional nature of the debate, the role of the United Nations, its Regional Centre for Peace, Disarmament and Development in Lima, and other regional organizations, that specialize in drawing up proposals in this area, will be crucial.

Notes

1 President George Bush, "Security Strategy for the 1990s", in *Current Policy* N° 1178; address by George Bush at the Coast Guard Academy graduation ceremony, New London, Connecticut, 24 May 1989.

2 Aaron Karp, "Ballistic missile proliferation in the third world". *World Armaments and Disarmament. SIPRI Yearbook 1989* (New York, Oxford University Press, 1989), p. 291.

3 Victor Millán, "Argentina: schemes for glory", in Michael Brzoska and Thomas Ohlson, eds., *Arms Production in the Third World* (London, Taylor & Francis, 1986), p. 44.

4 Victor Millán, *op. cit.*, pp. 45, 53 and 309.

5 Aaron Karp, *op. cit.*, p. 291.

6 On 28 May 1991 the Argentine Government announced plans designed to ensure that development would cease. Components

were to be rendered militarily useless and key personnel associated with the project were to be transferred to the civilian sector. According to Argentine authorities, Condor II, a multi-purpose vehicle, was intended as a space launch vehicle (SLV). Given its specifications, Condor II could have been used to carry a nuclear payload.

7 Development of the MAA-1 air-to-air missile began in 1976 and was halted at least three times because there was no firm Brazilian Air Force requirement. The requirement may have been resurrected given the Air Force's plans to procure the AMX fighter aircraft developed jointly with Italy. See, Jane's Information Group, *Jane's Weapon Systems 1988-89* (London, Butler & Tanner Ltd, 1990), p. 692.

8 *O Estado de Sao Paulo*, 18 July 1990.

9 *Folha de Sao Paulo*, 26 May 1989.

10 In the case of the Osorio main battle tank, which received Saudi financing, the financial interest in the project has not resulted in expected sales. The Saudis appear to have opted to procure the US M1 Abrams instead.

11 A/45/309. The text of the Argentine-Brazilian Declaration on nuclear policy was reproduced in *Disarmament: A Periodic Review by the United Nations*, vol. XIV, No. 1, 1991.

Africa as a Nuclear-Weapon-Free Zone (*continued*)*

Nathan Shamuyarira

Outline of Efforts to Establish a Nuclear-Weapon-Free Zone in Africa

The genesis of the movement for the denuclearization of Africa is normally traced to opposition on the continent to French atomic testing in the Sahara, announced in 1958 and carried out in 1960. Practically all African countries independent at the time opposed those tests. Morocco sent five protest notes to France between 1958 and 1959 alone. Newly independent Nigeria broke diplomatic relations with France in 1960. At the continental level, the first Conference of Independent African States, which met at Accra in 1958, condemned the French plans and appealed to France not to carry out its tests—a plea which was repeated by the same body at its second meeting, at Monrovia in 1959.

The subject was put before the First Committee of the United Nations General Assembly in 1959 and extensively discussed. At the end of that discussion, the Assembly adopted resolution 1379 (XIV) of 20 November 1959, whereby it expressed "its grave concern over the intention of the Government of France to conduct nuclear tests" in the Sahara, and requested France "to refrain from such tests".

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After France proceeded to conduct its tests in Algeria in 1960, President Nkrumah of Ghana addressed the General Assembly in September 1960, requesting that the United Nations should encourage "the growth of zones free from nuclear warfare. ... a start should be made by all nuclear Powers agreeing to keep Africa out of their nuclear warfare plans".[1] This was in fact the first public articulation of a desire for the establishment of a nuclear-weapon-free zone in Africa by anyone. That very year the Ghanaian delegation at the United Nations tabled a resolution aimed at having the United Nations declare Africa "a denuclearized zone",[2] but that was not put to the vote that year because of a combination of Western and francophone African opposition. The main objection on the part of most of francophone Africa was that Ghana had no right to table a resolution at the United Nations which had not yet been discussed by African leaders at the continental level. It was clear that, from then on, the major task was to secure an African consensus on the issue.

The following year, mainly as a result of the toning down of the language that had been used in the Ghanaian draft of 1960, particularly as it pertained to France and French actions, the United Nations was able to adopt resolution 1652 (XVI) entitled "Consideration of Africa as a denuclearized zone". In addition to requesting States not to conduct nuclear tests in Africa in any form, this resolution also called upon all States "to consider and respect the continent of Africa as a denuclearized zone".

The next significant steps in this saga were taken at Addis Ababa, Ethiopia. In May 1963, at the founding meeting of the Organization of African Unity (OAU), the summit Conference of Independent African States adopted a resolution on general disarmament whereby they, *inter alia*, undertook "to affirm and respect the principle of declaring Africa a denuclearized zone".[3] This was the beginning of the African consensus on the idea of the

denuclearization of the continent. In 1964 that consensus was developed further when the Assembly of Heads of State and Government of the OAU adopted the Declaration on the Denuclearization of Africa, whereby the African countries declared their readiness "to undertake, in an international agreement to be concluded under the auspices of the United Nations, not to manufacture or otherwise acquire control of nuclear weapons".[4] It is on this resolution that all subsequent efforts at the denuclearization of Africa by the OAU have been based.

The following year, African States put the Declaration before the General Assembly of the United Nations, which endorsed it through resolution 2033 (XX), and expressed the hope that African States would initiate studies aimed at the implementation of the Declaration through the OAU. There the matter rested for the next ten years, with the ball having been thrown firmly back into the court of the OAU by the United Nations with regard to responsibility for implementing the 1964 Declaration. No further action was taken either at the level of the OAU or the United Nations until 1974, when the issue was again raised at the latter organization.

In its resolution 3261 E (XXIX) of 1974, the General Assembly reaffirmed its call upon all States to consider and respect the continent of Africa as a nuclear-free zone; reiterated its call upon all States to respect and abide by the Declaration on the Denuclearization of Africa; reiterated further its call upon all States to refrain from testing, manufacturing, deploying, transporting, storing, using or threatening to use nuclear weapons on the African continent; requested the United Nations Secretary-General to render all necessary assistance to the OAU towards the realization of the aims and objectives of the resolution; and decided to include the item on the "Implementation of the Declaration on the Denuclearization of Africa" in the agenda of the thirtieth session.

From the above it is clear that the 1974 resolution was significant not for its substance, which was basically similar to that of previous resolutions by both the United Nations and the OAU, but for its being adopted at all—its presence, which meant a re-inscription of the subject of the denuclearization of Africa on the agenda of the international community after an absence of nearly a decade. Thus perhaps the most important paragraph of the resolution was the last operative one, which served to include the subject in the agenda of the thirtieth and subsequent sessions of the Assembly.

The next resolution of the General Assembly on the subject of the denuclearization of Africa, 3471 (XXX) of 1975, differed from the 1974 resolution in that the continent of Africa is defined more elaborately as including "the continental African States, Madagascar and other islands surrounding Africa"; in that for the first time the Assembly agreed in an operative context that the implementation of the Declaration on the Denuclearization of Africa "will be a significant measure to prevent the proliferation of nuclear weapons in the world, conducive to general and complete disarmament, particularly nuclear disarmament", and in that the request to the Secretary-General, unlike that in the resolution of the previous year on the subject, was no longer for assistance aimed at securing the objectives of the resolution, but for assistance aimed at "the realization of the solemn Declaration on the Denuclearization of Africa".

Resolution 31/69 of 1976 was dominated by the question of Pretoria's new-found nuclear-weapon capability. The thirteenth Assembly of Heads of State and Government of the OAU, held at Port Louis, Mauritius, from 2 to 6 July 1976 had expressed serious concern over the nuclear and other military collaboration of some Western States and Israel with South Africa, which had enabled that country to attain a nuclear capability. Through its 1976 resolu-

tion, the General Assembly expressed concern that further development of South African nuclear capability "would frustrate efforts to establish nuclear-weapon-free zones in Africa and elsewhere as an effective means for preventing the proliferation, both horizontal and vertical, of nuclear weapons and for contributing to the elimination of the danger of a nuclear holocaust"; and appealed to all States "not to deliver to South Africa or place at its disposal any equipment or fissionable material or technology that will enable the racist regime of South Africa to acquire nuclear-weapon capability".

Clearly, the struggle for the denuclearization of Africa had begun to focus on the more immediate danger of the nuclearization of Africa through the attainment of a nuclear-weapon capability by South Africa. Not only was South Africa considered a pariah State in Africa, having significant differences with the generality of the other African States, and thus constituting an ever-present source of danger to them, but it was also felt that South Africa would not have been as strong as it was had there not been a deliberate effort on the part of some States, particularly some of the Western States and Israel, to make it so. Moreover, in September 1977, a Soviet satellite had picked up what appeared to be a nuclear-test site under construction in the Kalahari. In its resolution 32/81 of 1977, therefore, the General Assembly condemned any attempt by South Africa to introduce nuclear weapons into the continent of Africa; demanded that South Africa refrain forthwith from conducting any nuclear explosion on the African continent or elsewhere; made an urgent request to the Security Council to take appropriate effective steps to prevent South Africa from developing and acquiring nuclear weapons, thereby endangering international peace and security; and appealed to all States to refrain from such cooperation with South Africa in the nuclear field as would enable the racist regime to acquire nuclear weapons "and

to dissuade corporations, institutions and individuals within their jurisdiction from any such cooperation".

The combating of South African nuclear capability was to dominate the African agenda on denuclearization for the rest of the 1970s, all the 1980s, up to the present moment in the 1990s. All subsequent resolutions have focused on the South African issue not only as constituting a danger in itself, but also as frustrating the objective of the denuclearization of Africa. It has been considered proper that African States should fight South African acquisition of nuclear-weapon capability. Such capability is, after all, a stark negation of their avowed aim of making Africa nuclear-weapon-free—a region defined as including all of continental Africa, of which South Africa is a part. South Africa, moreover, is the most technologically advanced country on the continent in nuclear terms. Stopping it from going nuclear would be definitive of whether African States *could* stop a country that was determined and able to go nuclear.

Resolutions adopted by the United Nations on the question of the denuclearization of Africa did not change much after the inclusion of the South African factor as a disabling factor in the implementation of the 1964 Declaration, and there is therefore no need to go into detail about each one of them. Rather, it would be more profitable to examine African activity related to this issue in another forum, a forum of great relevance for the continent—the OAU.

The first major pronouncement on the issue of denuclearization by the African States in the context of the OAU after 1965 was in 1979, when, at its thirty-third Ordinary Session, held in Monrovia, Liberia, from 6 to 20 July, the OAU Council of Ministers adopted a resolution on the denuclearization of Africa (CM/Res. 718 (XXXIII) Rev. 1).[5] Through that resolution, the Ministers expressed their grave concern over nuclear cooperation between

South Africa and Israel and over "the threat posed to the security of Africa as a result of South Africa's nuclear capability through extensive material and technological assistance which it receives from its Western partners". They also called upon the Western Powers to refrain from supplying South Africa with nuclear material and technology, condemned Israel and all other States for their nuclear collaboration with South Africa, and condemned "the continued and growing cooperation in the nuclear sphere between South Africa's racist regime and Israel in view of the threat it poses to the security and peace of the African continent and people".

In 1964, the OAU Secretariat had been asked to prepare a draft convention for the denuclearization of the continent of Africa. The Secretariat submitted the draft convention to the OAU Council of Ministers meeting at its Second Ordinary Session in Lagos, Nigeria, in February 1964.[6] The Council took note of the draft convention and decided, through its resolution CM/Res. 28 (II), to refer it to the Governments of member States of the OAU for further study and the submission of observations and comments. In their resolution of July 1979, therefore, the Council of Ministers recalled this earlier draft convention and invited OAU member States to study it and transmit their observations and comments thereon to the Secretary-General of the OAU "at the earliest possible date, and in any case, not later than the next Summit Conference". Essentially, through the 1964 draft Convention for the Denuclearization of the Continent of Africa, the African States were to undertake:

a To prohibit, prevent and not carry out any nuclear-weapon test as well as the manufacture of nuclear weapons, or any other nuclear explosion at any place under their respective jurisdiction and control;

b Not to receive nuclear weapons, including nuclear launching devices, at any place under their respective jurisdiction and control;

c To prevent carrying out or continuing to carry out in their respective territories nuclear tests in any form;

d To prevent the use of the territory, territorial waters and airspace under their respective jurisdictions for testing, storing or transporting nuclear weapons.

Despite the call contained in the Council of Ministers resolution CM/Res. 718 (XXXIII) Rev. 1, few States submitted their views on the draft, and the Secretary-General was not able to report substantively to the next Assembly of Heads of State and Government, as had been requested of him.

The issue of the denuclearization of Africa was only taken up again at the level of the OAU in 1987, when the OAU Council of Ministers, meeting in its forty-sixth Ordinary Session at Addis Ababa in July, adopted resolution CM/Res. 1101 (XLVI) Rev. 1, entitled "Resolution on the denuclearization of Africa".[7] Through that resolution, the Council of Ministers solemnly reaffirmed the objectives of the Declaration on the Denuclearization of Africa, strongly reaffirmed its conviction that implementation of the Declaration would constitute "an important measure to prevent the proliferation of nuclear weapons and to promote regional as well as international peace and security", expressed grave alarm at Pretoria's possession and continued development of nuclear-weapon capability in contravention of the objectives of the 1964 Declaration; called upon all States and the international community as a whole to take the necessary measures to ensure the implementation of the Declaration, and to that end to refrain from collaborating with South Africa in the nuclear field; to consider and respect Africa as a nuclear-weapon-free zone and to stop uranium purchases from South Afri-

can sources; and invited OAU member States to submit to the Secretary-General of the Organization their observations on the implementation of the Declaration, "including the drafting of a relevant convention or treaty". The OAU Secretary-General is yet to report to the Council of Ministers of the Organization on the response of the African States to the invitation to submit their views on this matter.

So much for the actual activity of the African States in pursuit of the objective of establishing a nuclear-weapon-free zone on the continent. A pertinent issue which can help explain the fortunes of the implementation effort and prospects for the success of this endeavour in the future, and which therefore needs consideration here is why the African States have pursued denuclearization at all. What were/are their motives? What benefits can accrue to them from denuclearization or the establishment of a nuclear-weapon-free zone in Africa today?

Rationale for an African Nuclear-Weapon-Free Zone

In the first place there are historical reasons why African States have pursued denuclearization—reasons that are not necessarily coincidental to or co-terminus with objectively adduced reasons for establishing a nuclear-weapon-free zone in the African context today. The need to stop French nuclear tests in the Sahara is such a historical reason, which is no longer relevant. Other similar reasons are the need to stop colonial Powers from using their former African colonies for nuclear testing and the need to prevent Africa from being drawn into the cold war. It was felt that Africa could be spared bloc rivalry and confrontation ideologically through non-alignment and strategically/militarily through denuclearization, since nuclear confrontation was definitive of the central strategic balance between East and West. In this context, even the question of combating South African nuclear-weapon ca-

pability, no matter how urgent and important it is, must also be viewed as a "historical" motive pertaining to a particular era characterized by a particular situation. In the final analysis, this motive must be subsumed under the general motive of combating *all* military nuclear activity on the African continent and elaborating continent-wide mechanisms for peaceful nuclear activities.

While the need to stop French nuclear tests between 1958 and 1966, and the need to combat South African nuclear capability after 1974 have been the most pressing reasons for African States' search for denuclearization, there are many more permanent reasons that can be cited why African States should establish a nuclear-weapon-free zone on their continent. One such reason, which the African States themselves have always advanced, is that they would like to contribute to general and complete disarmament not only in order to save Africa, but as part of an international effort to save all of humanity. Thus in the preamble to the 1964 Declaration, the heads of State and Government declared their consciousness of their responsibilities towards their peoples and their "obligations under the Charter of the United Nations and the Charter of the Organization of African Unity *to exert every effort to strengthen international peace and security*" [author's emphasis], and their determination "that conditions conducive to international peace and security should prevail *in order to save mankind from the scourge of nuclear war*" [author's emphasis]. Likewise, in their resolution entitled "Disarmament and nuclear tests" of August 1963,[8] the Council of Ministers reaffirmed their determination to prevent the storage and dissemination of nuclear arms that threaten the security and prosperity of mankind; welcomed the conclusion of the partial test-ban Treaty at Moscow as a first step towards general and complete disarmament; and expressed the conviction that differences impeding the agreement banning all tests in all environments could be

resolved. Thus even in their own resolutions on denuclearization, there was a clear, non-parochial dimension to African motivation for denuclearization. That is the dimension which sustained African interest in the issue even when an intense but ephemeral motive, such as stopping French nuclear testing in the Sahara, waned. At the international level, there can be no question that an African nuclear-weapon-free zone would help curb the proliferation of nuclear weapons and contribute to international peace and security.

At the level of the African continent and the security of each African State too, there cannot be any doubt as to the benefits that the establishment of a nuclear-weapon-free zone can bring. Africa is a continent where, with the possible exception of South Africa, no country possesses nuclear weapons. Should any African State acquire nuclear weapons, not only will the entire continent be endangered in that the country so endowed will become a legitimate target of attack with nuclear weapons by extra-continental nuclear Powers, but such a development is also likely to trigger a nuclear-arms race among the African States themselves. Such a development would destabilize the continent not only through the proliferation of crude nuclear devices in it, but also through the socio-economic costs of the diversion of human and material resources on a grand scale away from development projects towards exotic nuclear armament. It is a sustainable proposition that no African State, the possessor included, could gain, or even fail to suffer an erosion in, security from the introduction of nuclear weapons into the African continent.

Through establishing a nuclear-weapon-free zone on their continent, the African States could also manage to secure negative security guarantees from the nuclear Powers. As is widely known, the nuclear Powers failed to give such guarantees categorically in the context of the non-pro-

liferation Treaty (NPT)—Security Council resolution 255 of 1968 was patently inadequate, since the Powers concerned did not undertake not to attack non-nuclear-weapon States with nuclear weapons, but only stated vaguely that, in the event of an attack on a non-nuclear-weapon State with nuclear weapons, they would immediately act in accordance with their responsibilities under the United Nations Charter. Given that each of the said nuclear Powers has a veto in the Council which would paralyse that body in such a situation, resolution 255 is singularly without value. While the nuclear-weapon Powers would not give such guarantees under the terms of the non-proliferation Treaty, they were able to do so within the context of the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco). The reasons why the nuclear Powers could not give a blanket guarantee to all non-nuclear-weapon States are manifest, and it seems obvious that they would extend such guarantees to African States in the context of an African nuclear-weapon-free zone treaty.

Another benefit that could accrue to Africa from the establishment of a nuclear-weapon-free zone concerns the peaceful utilization of nuclear energy. The 1975 United Nations study on the question of nuclear-weapon-free zones in all its aspects clearly cites as a benefit from such a measure "the creation of a framework for regional cooperation in the peaceful uses of nuclear energy".[9] Even now, nuclear energy is playing a vital role in the development of Africa in health, agriculture, hydrology and mining. There is room for expanding the role of this technology both in existing usages and to new fields, such as electricity-generation. Most of the obstacles to such expanded use of nuclear energy would fall away if a regional and/or subregional approach, rather than separate national approaches to the technology, were adopted.

Given these benefits to accrue from the establishment of a nuclear-weapon-free zone in Africa, it must be asked what the prospects today are for establishing such a zone in Africa. That is the task of the following segment.

Prospects for the Establishment of a Nuclear-Weapon-Free Zone in Africa

It has been said in another context that people move more determinedly to resist a worsening in their circumstances than they do to better them. The same can be said with regard to the implementation of the Declaration on the Denuclearization of Africa. African States have been most vocal and combative over a possible deleterious revision of the status quo, such as would occur if foreign countries were to test nuclear weapons in Africa or if South Africa attained a nuclear-weapon capability. Their support for the concept of denuclearization has been most intense when they have been thus faced with the prospect of a dangerous alteration in their current circumstances. They have not, however, been equally zealous in promoting denuclearization *per se*. Thus it could be said that their approach to denuclearization or the establishment of a nuclear-weapon-free zone in Africa has been essentially negative, their actions motivated not by what they wanted to see happen in Africa, but rather by what they did not want to see happen.

Several reasons can be adduced to explain why this has been so. In the first place, Africa has been a region characterized by the absence of nuclear weapons, which means that for the main part it was action, rather than the lack of it, that could spell danger. In other words, if everyone just left the situation as it was, Africa would remain quite safe and free of nuclear weapons.

The trouble with this approach, of course, was that not everybody was prepared to leave the situation as it was. To counter this unhealthy development, the African States

were prepared to adopt the brush-fire approach, putting out their fire where they found it: combating French nuclear tests in the Sahara when they threatened continental tranquillity and doing the same for South African nuclear capability in its turn. This approach was also reinforced by General Assembly resolution 1652 (XVI) of 1961, whereby the world body called upon all States "to consider and respect the continent of Africa as a denuclearized zone". Given this pronouncement by the international community, it did appear that Africa could be saved by just having all States abide by this injunction, and that the role of the African States could be confined to ensuring that all States in fact did so.

Then there was also the question of African States' adherence to the non-proliferation Treaty of 1968. The majority of African States, including all the potential nuclear States (except South Africa until July 1991), are parties to that Treaty. Even the reason of the mainly southern African States that for some time resisted joining the Treaty was not nuclear ambition, but the desire to protest Western nuclear collaboration with South Africa. Thus there was no immediate threat of a nuclear-arms race on the continent, which, if there had been, might have acted as a spur to greater efforts towards denuclearization.

It can therefore be said that the denuclearization of Africa, besides being obstructed by the possibility of South African nuclear capability, has been the victim of a perception that the goal is without any urgency. As already pointed out, most of the States of the region are quite far from developing nuclear capability. Moreover, most of them—and practically all which matter—have either already promised, or are about to promise, not to acquire nuclear weapons by joining the non-proliferation Treaty, and, as for the activities of other States on the continent, the United Nations has repeatedly asked all States to

consider and respect the continent of Africa as a nuclear-weapon-free zone.

Yet even with all this paraphernalia in place, it is still essential that a proper nuclear-weapon-free zone be established in Africa through an internationally binding instrument whereby the obligations of zonal and extra-zonal States would be clearly defined, the extent of the zone clearly defined, and terms used in the agreement (treaty or convention) also clearly defined. Its importance notwithstanding, resolution 1652 (XVI) of 1961 is still a mere recommendation by the General Assembly, not a treaty obligation contracted by States Members of the United Nations. The same goes for all other pronouncements by the United Nations General Assembly on the issue. Although for the NPT, being a treaty, entails contractual obligations, not all African States are parties to it. Even if they were, the Treaty does not prevent the stationing of nuclear weapons in the territories of its parties. The example of Soviet nuclear deployment in Eastern European countries parties and of United States nuclear deployment in Western European countries parties is ample proof that the NPT is consistent with the presence of nuclear weapons on the territory of States parties to it. A nuclear-weapon-free zone, on the other hand, implies a regime of *total absence* of nuclear weapons in the territories of States parties to it. One can envisage, in the context of an NPT-type agreement, a situation where African States could have the nuclear weapons of outside Powers situated on their territories. Once this happened, which would be quite consistent with the NPT, not only would such African States themselves become legitimate targets of nuclear attack, but a "deployment race" in Africa could also be precipitated, as various outside States are invited to deploy in rival States, thus negating all meaning from the fact that the African States would term themselves "non-nuclear-weapon States".

A nuclear-weapon-free zone in Africa is therefore a qualitative improvement, not only on the status quo, but also on the NPT. Quite apart from the fact that such a zonal arrangement could meet the approval of zonal States that have not joined the NPT because they feel it is an "unequal" treaty (as in the case of Brazil, Argentina and Chile with regard to Tlatelolco),[10] it would also effectively put the zone outside the ambit of nuclear competition and attract for it negative and even positive security guarantees.

African States have, with the exception of South Africa, always stated that they were prepared to establish a nuclear-weapon-free zone in Africa. The only reason they quote as disabling has been South African nuclearization. Now South Africa has joined the NPT, which means that it is willing to enter the halfway house of refraining from becoming a nuclear Power. Is the denuclearization of Africa therefore nearer?

One certainly hopes so, but alas, the situation is not quite so simple. Africa may be a compact and easily defined geographical unit, but its security relations are not. The situation in the Middle East quickly comes to mind. Given the Israeli-Arab conflict, the Middle East, comprising countries in north Africa and those in Arabia and Palestine, looks even more of a security unit than Africa as such. Thus it is unrealistic to ask the Libyan Arab Jamahiriya, Egypt, Algeria and Morocco to tie their nuclear plans to what happens in Madagascar and Pretoria and not to what happens in Tel Aviv, Damascus and Teheran. It was partly for this reason that William Epstein, in his monograph on the subject in 1977, expressed the view that if Africa wanted to establish a nuclear-weapon-free zone in the near future, a country such as Egypt might have to be left out, perhaps to join later.[11]

Most of the north African countries (including Egypt) have now joined the NPT, and Egypt and the Islamic Republic of Iran have also been prime movers for

a nuclear-weapon-free zone in the Middle East. Progress in that area is being stalled by Israeli insistence that it must negotiate directly with its neighbours about such a zone (which would imply its recognition by all of them) rather than be asked merely to respond to studies and recommendations of the United Nations and its Secretary-General. Whatever happens in that sphere, there can be no question that progress on the Middle Eastern nuclear-weapon-free zone will greatly facilitate progress on an African nuclear-weapon-free zone.

An associated point is that part of the reason for the non-realization of an African nuclear-weapon-free zone has been the fixation of African States on a continent-wide nuclear-weapon-free zone. There is absolutely no reason why this should be an immutable rule. As already explained above, security relationships among the countries involved do not conform to the continental geographical map. Some subregions form more self-contained security units than others. If such areas were to form subregional nuclear-weapon-free zones, this would not only serve their own immediate security interests, but might even enhance the prospect of a continent-wide nuclear-weapon-free zone. The international community has given its blessing to the establishment of such subregional nuclear-weapon-free zones. In the 1975 United Nations study already mentioned, the experts were agreed that "obligations relating to the establishment of nuclear-weapon-free zones may be assumed not only by groups of States, including entire continents or large geographical regions, but also by smaller groups of States and even individual countries".[12]

Perhaps it was with these twin facts in mind—that there are subregional security units and that the international community endorses the formation of nuclear-weapon-free zones at that level—that some writers have begun to argue for nuclear-weapon-free zones that do not cover the entire African continent. Writing in *Le Mauritien*

on 1 July 1990, for example, the Secretary-General of the Mauritian Militant Movement, Mr. Paul Berenger, proposed the establishment of a South-West Indian Ocean and Southern African Nuclear-Free Zone Treaty.[13] Such a treaty, to include States of the Indian Ocean Commission (Mauritius, Madagascar, Seychelles and Comoros), South Africa, and South Africa's immediate neighbours (Lesotho, Swaziland, Botswana, Mozambique, Namibia and Zimbabwe), is commended primarily because it has become *possible*, given that most of the frontline States—Mozambique, United Republic of Tanzania, Zambia and Zimbabwe—and South Africa have acceded to the non-proliferation Treaty.

The proposal by Mauritius is still mainly that: a proposal. However, it shows that many thoughtful people are still giving consideration to the denuclearization of Africa. The 1964 Declaration on the Denuclearization of Africa is still with us, but the main guidance it imparts to us is the goal we must pursue. With regard to the means, it is incumbent upon us to choose those that will enable us to make the greatest progress in our given circumstances.

Notes

1 *Official Records of the General Assembly, Fifteenth Session*, Plenary meeting 869, para. 69.

2 *Official Records of the General Assembly, Fifteenth Session, Annexes*, agenda items 67, 86, 69 and 73, document A/4680, para. 17 (A/C.1/L.264/Rev.1).

3 Resolution on general disarmament (document CIAS/ Plen. 2/ Rev. 2D), Conference of Independent African States, Addis Ababa, May 1963.

4 Resolution AHG/Res. 11(I). Declaration on the Denuclearization of Africa, OAU, Addis Ababa, 1964.

5 Resolution on the denuclearization of Africa (document CM/Res.718 (XXXIII) Rev. 1), OAU, Monrovia, July 1979.

6 Draft Convention for the Denuclearization of the Continent of Africa (document CM/3(I)), OAU, February 1964.

7 Resolution on the denuclearization of Africa (document CM/Res 1101 (XLVI) Rev. 1), OAU, Addis Ababa, 20-25 July 1987.

8 Resolution on disarmament and nuclear tests (document CM/Res. 3(I)), OAU, August 1963.

9 *Comprehensive Study of the Question of Nuclear-Weapon-Free Zones in All Its Aspects*, Special Report of the Conference of the Committee on Disarmament (A/10027/Add.1) (United Nations publication, Sales No. E.76.I.7), para. 83.

10 Most of the nuclear threshold countries, which include not only the Latin American States mentioned, but also India, Israel, South Africa and Pakistan, have argued that the NPT creates a privileged class of nations, the five recognized nuclear Powers. They therefore feel that adherence to the Treaty would imply that they are less equal or less sovereign than these States.

11 William Epstein, "A nuclear-weapon-free zone in Africa?", Occasional Paper No. 14, Stanley Foundation, Muscatine, Iowa, 1977.

12 *Comprehensive Study of the Question of Nuclear-Weapon-Free Zones in All Its Aspects*, para. 90(a).

13 Paul R. Berenger, Secretary-General of the MMM, *Le Mauritien*, 1 juillet 1990.

Documentation Relating to Disarmament

Selected Security Council Resolutions on the Special Commission on Iraq

Security Council Resolution 707 (1991)*

The Security Council,

Recalling its resolution 687 (1991), and its other resolutions on this matter,

Recalling the letter of 11 April 1991 from the President of the Security Council to the Permanent Representative of Iraq to the United Nations (S/22485) noting that on the basis of Iraq's written agreement (S/22456) to implement fully resolution 687 (1991) the preconditions established in paragraph 33 of that resolution for a cease-fire had been met,

Noting with grave concern the letters dated 26 June 1991 (S/22739), 28 June 1991 (S/22743) and 4 July 1991 (S/22761) from the Secretary-General, conveying information obtained from the Executive Chairman of the Special Commission and the Director-General of the IAEA which establishes Iraq's failure to comply with its obligations under resolution 687 (1991),

Recalling further the statement issued by the President of the Security Council on 28 June 1991 (S/22746) requesting that a high-level mission consisting of the Chairman of the Special Commission, the Director-General of the IAEA, and the Under-Secretary-General for Disarmament Affairs be dispatched to meet with officials at the highest levels of the Government of Iraq at the earliest opportunity to obtain written assurance that Iraq will fully and immediately cooperate in the inspection of the locations identified by the Special Commission and present for immediate inspection any of those items that may have been transported from those locations,

* S/RES/707 (1991), adopted by the Security Council at its 3004th meeting, on 15 August 1991.

Dismayed by the report of the high-level mission to the Secretary-General (S/22761) on the results of its meetings with the highest levels of the Iraqi Government,

Gravely concerned by the information provided to the Council by the Special Commission and the IAEA on 15 July 1991 (S/22788) and 25 July 1991 (S/22837) regarding the actions of the Government of Iraq in flagrant violation of resolution 687 (1991),

Gravely concerned also by the evidence in the letter of 7 July 1991 from the Minister of Foreign Affairs of Iraq to the Secretary-General and in subsequent statements and findings that Iraq's notifications of 18 and 28 April were incomplete and that it had concealed activities, which both constituted material breaches of its obligations under resolution 687 (1991),

Noting also from the letters dated 26 June 1991 (S/22739), 28 June 1991 (S/22743) and 4 July 1991 (S/22761) from the Secretary-General that Iraq has not fully complied with all of its undertakings relating to the privileges, immunities and facilities to be accorded to the Special Commission and the IAEA inspection teams mandated under resolution 687 (1991),

Affirming that in order for the Special Commission to carry out its mandate under paragraph 9 (*b*) (i), (ii) and (iii) of resolution 687 (1991) to inspect Iraq's chemical and biological weapons and ballistic missile capabilites and to take possession of them for destruction, removal or rendering harmless, full disclosure on the part of Iraq as required in paragraph 9 (*a*) of resolution 687 (1991) is essential,

Affirming that in order for the IAEA, with the assistance and cooperation of the Special Commission, to determine what nuclear-weapons-usable material or any subsystems or components or any research, development, support or manufacturing facilities related to them need, in accordance with paragraph 13 of resolution 687 (1991), to be destroyed, removed or rendered harmless, Iraq is required to make a declaration of all its nuclear programmes including any which it claims are for purposes not related to nuclear-weapons-usable material,

Affirming that the aforementioned failures of Iraq to act in strict conformity with its obligations under resolution 687 (1991) constitutes a material breach of its acceptance of the relevant provisions of resolution 687 (1991) which established a cease-fire and provided the conditions essential to the restoration of peace and security in the region,

Affirming further that Iraq's failure to comply with its safeguards agreement with the International Atomic Energy Agency, concluded pursuant to the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968, as established by the resolution of the Board of Governors

of the IAEA of 18 July 1991 (GOV 2532),[1] constitutes a breach of its international obligations,

Determined to ensure full compliance with resolution 687 (1991) and in particular its section C,

Acting under Chapter VII of the Charter,

1 *Condemns* Iraq's serious violation of a number of its obligations under section C of resolution 687 (1991) and of its undertakings to cooperate with the Special Commission and the IAEA, which constitutes a material breach of the relevant provisions of resolution 687 which established a cease-fire and provided the conditions essential to the restoration of peace and security in the region;

2 *Further condemns* non-compliance by the Government of Iraq with its obligations under its safeguards agreement with the International Atomic Energy Agency, as established by the resolution of the Board of Governors of 18 July, which constitutes a violation of its commitments as a party to the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968;

3 *Demands* that Iraq

i provide full, final and complete disclosure, as required by resolution 687 (1991), of all aspects of its programmes to develop weapons of mass destruction and ballistic missiles with a range greater than 150 km, and of all holdings of such weapons, their components and production facilities and locations, as well as all other nuclear programmes, including any which it claims are for purposes not related to nuclear-weapons-usable material, without further delay;

ii allow the Special Commission, the IAEA and their Inspection Teams immediate, unconditional and unrestricted access to any and all areas, facilities, equipment, records and means of transportation which they wish to inspect;

iii cease immediately any attempt to conceal, or any movement or destruction of any material or equipment relating to its nuclear, chemical or biological weapons or ballistic missile programmes, or material or equipment relating to its other nuclear activities without notification to and prior consent of the Special Commission;

1 A/45/1037; S/22812, appendix.

iv make available immediately to the Special Commission, the IAEA and their Inspection Teams any items to which they were previously denied access;

v allow the Special Commission, the IAEA and their Inspection Teams to conduct both fixed wing and helicopter flights throughout Iraq for all relevant purposes including inspection, surveillance, aerial surveys, transportation and logistics without interference of any kind and upon such terms and conditions as may be determined by the Special Commission, and to make full use of their own aircraft and such airfields in Iraq as they may determine are most appropriate for the work of the Commission;

vi halt all nuclear activities of any kind, except for use of isotopes for medical, agricultural or industrial purposes, until the Security Council determines that Iraq is in full compliance with this resolution and paragraphs 12 and 13 of resolution 687 (1991), and the IAEA determines that Iraq is in full compliance with its safeguards agreement with that Agency;

vii ensure the complete implementation of the privileges, immunities and facilities of the representatives of the Special Commission and the IAEA in accordance with its previous undertakings and their complete safety and freedom of movement;

viii immediately provide or facilitate the provision of any transportation, medical or logistical support requested by the Special Commission, the IAEA and their Inspection Teams;

ix respond fully, completely and promptly to any questions or requests from the Special Commission, the IAEA and their Inspection Teams;

4 *Determines* that Iraq retains no ownership interest in items to be destroyed, removed or rendered harmless pursuant to paragraph 12 of resolution 687 (1991);

5 *Requires* that the Government of Iraq forthwith comply fully and without delay with all its international obligations, including those set out in the present resolution, in resolution 687 (1991), in the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968 and its safeguards agreement with the IAEA;

6 *Decides* to remain seized of this matter.

Security Council Resolution 715 (1991)*

The Security Council,

Recalling its resolutions 687 (1991) of 3 April 1991 and 707 (1991) of 15 August 1991, and its other resolutions on this matter,

Recalling in particular that under resolution 687 (1991) the Secretary-General and the Director General of the International Atomic Energy Agency were requested to develop plans for future ongoing monitoring and verification, and to submit them to the Security Council for approval,

Taking note of the report and note of the Secretary-General,[1] transmitting the plans submitted by the Secretary-General and the Director General of the International Atomic Energy Agency,

Acting under Chapter VII of the Charter of the United Nations,

1 *Approves*, in accordance with the provisions of resolutions 687 (1991), 707 (1991) and the present resolution, the plans submitted by the Secretary-General and the Director General of the International Atomic Energy Agency;[1]

2 *Decides* that the Special Commission shall carry out the plan submitted by the Secretary-General,[2] as well as continuing to discharge its other responsibilities under resolutions 687 (1991), 699 (1991) and 707 (1991) and performing such other functions as are conferred upon it under the present resolution;

3 *Requests* the Director General of the International Atomic Energy Agency to carry out, with the assistance and cooperation of the Special Commission, the plan submitted by him[3] and to continue to discharge his other responsibilities under resolutions 687 (1991), 699 (1991) and 707 (1991);

4 *Decides* that the Special Commission, in the exercise of its responsibilities as a subsidiary organ of the Security Council, shall:

* S/RES/715 (1991), adopted by the Security Council at its 3012th meeting, on 11 October 1991.

1 S/22871/Rev.1 and S/22872/Rev.1 and Corr.1.

2 S/22871/Rev.1.

3 S/22872/Rev.1 and Corr.1.

a Continue to have the responsibility for designating additional locations for inspection and overflights;

b Continue to render assistance and cooperation to the Director General of the International Atomic Energy Agency, by providing him by mutual agreement with the necessary special expertise and logistical, informational and other operational support for the carrying out of the plan submitted by him;

c Perform such other functions, in cooperation in the nuclear field with the Director General of the International Atomic Energy Agency, as may be necessary to coordinate activities under the plans approved by the present resolution, including making use of commonly available services and information to the fullest extent possible, in order to achieve maximum efficiency and optimum use of resources;

5 *Demands* that Iraq meet unconditionally all its obligations under the plans approved by the present resolution and cooperate fully with the Special Commission and the Director General of the International Atomic Energy Agency in carrying out the plans;

6 *Decides* to encourage the maximum assistance, in cash and in kind, from all Member States to support the Special Commission and the Director General of the International Atomic Energy Agency in carrying out their activities under the plans approved by the present resolution, without prejudice to Iraq's liability for the full costs of such activities,

7 *Requests* the Committee established under resolution 661 (1990), the Special Commission and the Director General of the International Atomic Energy Agency to develop in cooperation a mechanism for monitoring any future sales or supplies by other countries to Iraq of items relevant to the implementation of section C of resolution 687 (1991) and other relevant resolutions, including the present resolution and the plans approved hereunder;

8 *Requests* the Secretary-General and the Director General of the International Atomic Energy Agency to submit to the Security Council reports on the implementation of the plans approved by the present resolution, when requested by the Security Council and in any event at least every six months after the adoption of this resolution;

9 *Decides* to remain seized of the matter.

Joint Declaration on the Complete Prohibition of Chemical and Biological Weapons: Mendoza Accord*

Mendoza, 5 September 1991

The Government of the Argentine Republic,

The Government of the Federative Republic of Brazil, and

The Government of the Republic of Chile,

Convinced that a complete ban on chemical and biological weapons will contribute to strengthening the security of all States;

Resolved to consolidate the region as an area of peace and cooperation free from the scourge of these weapons of mass destruction;

Confirming the respective unilateral declarations on the non-possession of chemical weapons previously issued by the three countries;

Agreeing on the need to prevent the spread of such weapons through a multilateral convention, currently under negotiation at the Conference on Disarmament, which would comprehensively ban chemical weapons and their production facilities, and urging all States that produce and possess such weapons to become parties to the convention;

Contributing to the confidence-building measures agreed upon by the States parties to the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, whose Third Review Conference will take place at Geneva from 9 to 27 September 1991;

Declare:

1 Their full commitment not to develop, produce, acquire in any way, stockpile or retain, transfer directly or indirectly, or use chemical or biological weapons;

2 Their intention, until such time as the future convention on chemical weapons enters into force, to give prior study to and jointly consider all the mechanisms necessary to ensure the fulfilment of the commitment entered into;

3 Their intention, until the aforesaid convention enters into force and in conformity with international law, to establish in their respective

* A/46/463, annex. The Mendoza Accord was signed on 5 September 1991 by Argentina, Brazil and Chile.

countries the appropriate mechanisms for controlling those substances defined as precursors of chemical warfare agents;

4 Their intention to cooperate closely in order to facilitate the conclusion of a multilateral convention on the prohibition of chemical weapons and to sign that convention simultaneously as original parties;

5 Their right to use all peaceful applications of chemistry and biology for economic and technological development and for the well-being of their peoples;

6 Their conviction that the implementation of the convention should create among the States parties a climate of mutual confidence which would serve substantially to increase international cooperation in the exchange of, *inter alia*, chemicals and related equipment and technologies;

7 Their intention to contribute decisively to the success of the Third Review Conference of the Convention on the Prohibition of Bacteriological (Biological) Weapons and their readiness to examine modalities for improving their methods of verification;

8 Their hope that other States in the region will sign the present Accord.

Signed at Mendoza, Argentina, on 5 September 1991.

United States–Soviet Joint Statement on Afghanistan*
Moscow, 13 September 1991

The United States of America and the Union of Soviet Socialist Republics, consistent with the United Nations General Assembly resolutions adopted at the forty-third, forty-fourth and forty-fifth sessions and with their commitment to the Geneva Accords on Afghanistan, recognize the fundamental right of the Afghan people to determine their own destiny free from outside interference. In this regard, they support the statement of the United Nations Secretary-General dated 21 May 1991, and reaffirm the need for a political settlement in Afghanistan that ensures an independent and non-aligned Afghanistan at peace with its neighbours and that establishes a new, broad-based government through an electoral process that respects Afghan political and Islamic traditions. The United States and the USSR agree that a transition period is required to reach these goals.

To this end, they call for and pledge to support a democratic and free electoral process that is not subject to manipulation or interference by anyone. The results of the electoral process must be respected and fully implemented by all.

They request the United Nations, with the support of concerned Governments, including those of Islamic countries, to work with the Afghans to convene a credible and impartial transition mechanism whose functions would include directing and managing a credible electoral process fully consistent with these principles. This transition mechanism, working closely with the United Nations and others as necessary, would have independent authority with all powers required to prepare for, conduct and implement the results of this electoral process leading to the establishment of a new government that will have the broad support of the Afghan people. The details of these and other powers and functions would be decided through an intra-Afghan dialogue.

The United States and the USSR agree that a cessation of hostilities is essential for the peaceful conduct of elections during the transition period and for a lasting political settlement. To facilitate this cessation, they agree to discontinue their weapons deliveries to all Afghan sides. They also agree that a cease-fire and a cut-off of weapons

* A/46/595-S/23163, annex I.

deliveries from all other sources should follow this step. They agree further to work towards withdrawal of major weapons systems from Afghanistan.

The United States and the USSR also reiterate their commitment to support an international humanitarian assistance effort to promote the prompt repatriation of refugees and reconstruction of Afghanistan.

To these ends, they reaffirm their willingness to promote in every way possible the efforts of the United Nations Secretary-General to contribute in practical ways to the early settlement of this conflict.

Commentary on the United States–Soviet Joint Statement on Afghanistan*
Moscow, 13 September 1991

Today, the USSR and the United States issued a joint statement on Afghanistan specifying agreed approaches of the sides to a political settlement in that country along the lines of the United Nations Secretary-General's statement of 21 May 1991.

Settlement of the issue of "negative symmetry", that is, discontinuation of Soviet and United States arms supplies to the conflicting Afghan sides, is one of the crucial elements of this agreement. The USSR and the United States agreed to cut off such supplies beginning 1 January 1992. They further agreed that neither the USSR nor the United States will intensify arms supplies to any Afghan side in the interim. It is also hoped that during the remaining time the issue of the Soviet prisoners of war (POWs) will be settled. The United States pledges its best efforts to resolve this important humanitarian question.

It is also expected that other countries involved in the Afghan conflict should also follow the USSR and the United States in limiting their assistance to Afghanistan to humanitarian assistance only.

We expect that our joint steps will facilitate launching an intra-Afghan negotiating process and should lead to a pause followed by a complete cessation of military operations.

* The United States Secretary of State and the USSR Foreign Minister (A/46/595-S/23163, annex II).

Developments in the El Salvador Peace Process New York Agreement*

New York, 25 September 1991

The Government of El Salvador and the Frente Farabundo Martí para la Liberación Nacional (hereinafter called "the Parties"),

Convinced of the need to give a final impetus to the process of negotiations currently taking place with the active participation of the Secretary-General of the United Nations, so that the set of political agreements required to bring a definitive end to the armed conflict in our country can be reached as speedily as possible,

Conscious of the fact that, in order to achieve the aforementioned objective, it is essential to establish a set of conditions and guarantees which will ensure the full implementation of those political agreements by both Parties,

Have reached the following political agreement:

I Comisión Nacional para la Consolidación de la Paz

1 The Comisión Nacional para la Consolidación de la Paz (National Commission for the Consolidation of Peace) (COPAZ) shall be responsible for overseeing the implementation of all the political agreements reached by the Parties. COPAZ is a mechanism for the monitoring of and the participation of civilian society in the process of the changes resulting from the negotiations, in relation both to the armed forces, in particular, and to the other items on the agenda.

2 *Composition*

a COPAZ shall be composed of two representatives of the Government, including a member of the armed forces, two representatives of FMLN and one representative of each of the parties or coalitions represented in the Legislative Assembly.

b The Archbishop of San Salvador and a delegate of ONUSAL shall have access to the work and deliberations of COPAZ, as observers.

3 *Decisions*

COPAZ shall adopt its decisions by majority vote.

4 *Powers*

a COPAZ shall not have executive powers since it is for the Parties, through their internal machinery, to carry out the peace agreements.

* A/46/502-S/23082, annex.

b The Parties shall be obliged to consult COPAZ before adopting decisions or measures relating to relevant aspects of the peace agreements. Similarly, COPAZ may consult the Parties, at the highest level, whenever it deems it appropriate to do so. In the event of a difference of opinion as to whether a matter should be submitted to COPAZ, the question shall be decided by COPAZ.

c At the request of three or more of its members, COPAZ shall be convened immediately and its opinion heard.

d COPAZ shall have direct access to the President of the Republic and shall meet with him whenever COPAZ itself or the President deems it appropriate.

e COPAZ shall have access to and may inspect any activity or site connected with the implementation of the peace agreements.

f COPAZ shall have the power to issue conclusions and recommendations of any kind relating to the implementation of the peace agreements and to make them public. The Parties undertake to comply with those conclusions and recommendations.

g COPAZ shall have the power to prepare the preliminary legislative drafts necessary for the development of the agreements which have been reached, both on the subject of the armed forces and on the other items on the agenda.

h COPAZ shall have the power to oversee the implementation of the agreements reached by the Parties, both on the subject of the armed forces and on the other items on the agenda.

i COPAZ shall be responsible for the preparation of the preliminary legislative drafts necessary to ensure that all those wounded in the war and, where appropriate, the families of combatants who have died, on both sides, are incorporated into the social security system of the State or receive adequate economic compensation, as provided for by law.

j In the performance of its functions, COPAZ shall be authorized to address the relevant organs of the United Nations, through the Secretary-General.

k COPAZ shall have full powers to organize its work in the manner which it deems most appropriate and to appoint any groups or subcommissions which it may deem useful in the discharge of its mission. For that purpose, it shall have its own budget.

5 *Form*

In addition to being the product of this political agreement, COPAZ shall be confirmed by law.

6 *Duration*

a Between the date of this agreement and the cessation of the armed conflict, two representatives of the Government, including one member of the armed forces, two representatives of FMLN and one representative of each of the parties or coalitions represented in the Legislative Assembly shall work under a special operational regime of a transitional nature which they themselves shall define. This work shall include the preparation of the preliminary draft legislation to formalize the establishment of COPAZ.

b The preliminary draft legislation to formalize the establishment of COPAZ shall be submitted to the Legislative Assembly within eight (8) days following the signing of the cessation of armed conflict. The formal establishment of COPAZ shall take place within eight (8) days following the promulgation of the said law.

c COPAZ shall be dissolved once the implementation of the peace agreements has been completed. Its dissolution shall be decided upon by COPAZ itself, by means of an agreement receiving a favourable vote from at least two thirds of its members.

7 *International guarantees*

a The establishment of COPAZ shall be explicitly endorsed by a resolution to be adopted by the Security Council concerning the peace agreements.

b The Secretary-General shall keep the Security Council informed regarding the activities and effectiveness of COPAZ.

c COPAZ shall be endorsed by Governments which are in a position to support effectively the guarantee required under the agreements as well as the work of COPAZ. In particular, the cooperation of those Governments shall be expressed and given in such a way as to promote the proposals set forth in the peace agreements as well as their full implementation.

II Purification[1]

1 A process of purification of the armed forces is agreed upon, on the basis of a vetting of all personnel serving in them by an *ad hoc* Commission.

1 The mechanisms for selecting all participants in the *ad hoc* Commission, as well as the voting criteria and other measures relating to the purification, will be dealt with in the compressed negotiations.

2 Participation by the armed forces will comprise two of their personnel, who shall have access only to the deliberations of the Commission.

III Reduction of the Armed Forces

1 The criteria for reduction of the armed forces shall be agreed upon between the Parties.

2 The criteria shall determine *inter alia* the guidelines on the basis of which:

a The size to which the armed forces shall be reduced in peacetime shall be determined;

b The plan for the reduction (manner, timetable, budget, etc.) shall be drawn up.

IV Doctrine of the Armed Forces

Agreement shall be reached on the redefinition of the doctrine of the armed forces based on the ideas that emerge from the agreements on this subject and from the constitutional reform. It is understood that the function of the armed forces is to defend the sovereignty of the State and the integrity of its territory, and that this doctrine should be based on the principle that the activities and regime of the armed forces shall be consistent with the principles deriving from the concept of the legally-constituted State governed by the rule of law, the primacy of the dignity of the human person and respect for human rights; defence of and respect for the sovereignty of the Salvadorian people; the concept of the armed forces as an institution in the service of the nation, free from all considerations of politics, ideology or social standing, and from all other forms of discrimination; and the subordination of the armed services to the constitutional authorities.

V Training System for the Armed Forces

Full effect will be given in its entirety to the agreement reached in Mexico on 27 April 1991 whereby the professional training of personnel serving in the armed forces shall place emphasis on the pre-eminence of human dignity and democratic values, respect for human rights and the subordination of such forces to the constitutional authorities. The agreements reached in this respect shall comprise regulatory provisions guaranteeing the foregoing points as well as the admission and instruction systems.

VI National Civil Police

The agenda for the negotiations on the National Civil Police

provided for in the constitutional reform approved in the Mexico agreements shall include the following items:[2]

a Establishment of the NCP.[3] Doctrine. Juridical regime;

b Disbandment of the National Guard and the Treasury Police, as Public Security Forces;

c Personnel of the NCP:

1 Vetting of National Police personnel.

2 Enlistment of new personnel. Pluralistic and non-discriminatory selection and training system.

3 Profiles and training.

4 International advisory services and support coordinated by the United Nations. The organization of the NCP and of the National Public Security Academy and the selection of their personnel will be the subject of close international cooperation and supervision.

5 Transitional regime.

VII Economic and Social Questions

1 Lands in excess of the constitutional limit of 245 hectares, as well as lands owned by the State which are not currently legally designated forest reserves, shall be used to meet the needs of peasants and small farmers who are without land. To this end, the Government shall also make arrangements to purchase lands offered for sale to the State.

2 The current land-holding situation in the conflict zones shall be respected until a satisfactory legal solution for the definitive land-holding regime is arrived at. The procedures and deadlines for the implementation of this agreement shall be agreed upon in the compressed negotiations.

3 The policies for granting loans to the agriculture and livestock sector shall be revised.

2 The negotiations on the National Civil Police and on the Public Security Forces are at an advanced stage. The Parties have in their possession a working paper which reflects the progress made.

3 Given the complexity of the task and the time required to carry it out, the process of organizing the new National Civil Police needs to begin immediately, i.e. without awaiting other political agreements or the cessation of the armed confrontation. To this end, provision of the international advisory services required has already begun.

4 The Parties refer to the compressed negotiations, as part of the economic and social subject area, consideration of the following topics:

a Measures required to alleviate the social cost of structural adjustment programmes;

b Appropriate procedures for direct external cooperation designed to encourage community assistance and development projects;

c Establishment of a Forum for economic and social accommodation, with participation by the governmental, labour and business sectors, for the purpose of continuing to resolve economic and social problems. The Forum may be open to participation by other social and political sectors as observers, under terms to be determined by it.

VIII Remainder of the Agenda

1 Other aspects still pending under the "Armed Forces" item relate to the guarantees of compliance with the agreements. No direct mention is made of these, because they are subject to agreement in the compressed negotiations. In any event, their fulfilment and implementation will be the responsibility of COPAZ.

2 On the same date, the Parties have agreed on an agenda for the compressed negotiations on the pending items, which shall be deemed to form part of the present agreement. Those items on this agenda which have been the subject of agreements in principle in the present agreement shall be subject to consideration and negotiation in conformity with the criteria and principles defined herein.

New York, 25 September 1991

Representing the Government of El Salvador:
Dr. Oscar Santamaría
Col. Mauricio Ernesto Vargas
Dr. David Escobar Galindo

Representing Frente Farabundo Martí para la Liberación Nacional:
Cmdr. Schafik Handal
Cmdr. Francisco Jovel
Cmdr. Salvador Sánchez Cerén
Cmdr. Eduardo Sancho
Cmdr. Joaquín Villalobos

Alvaro de Soto
Representative of the Secretary-General of the United Nations

The Compressed Negotiations*
New York, 25 September 1991

Article 1. Aims and Principles

Compression of the negotiations aims to secure, at one go, political agreements to:

a Coordinate an end to the armed conflict and to every act that violates the rights of the civilian population, under United Nations verification, subject to the approval of the Security Council; and

b Establish the guarantees and conditions needed to reintegrate members of FMLN into the civilian, institutional and political life of the country in absolute legality.

Accordingly, all the substantive items on the Agenda would be negotiated and settled prior to the end of the armed conflict. This will mean a cease-fire of predetermined length, short and dynamic, during which there would not be any substantive negotiations but only the measures necessary to put the agreements reached into practice.

This implies that the Agenda approved at Caracas should be reshaped to take account of the above aims and of the outcome of the negotiations conducted since then.

Article 2. Subjects for Negotiation

The matters to be negotiated are as follows:

I Armed Forces[1]

This item includes:

1 Doctrine.
2 Training system.
3 Purification.
4 Reduction.[2]

* A/46/502/Add.1-S/23082/Add.1, annex.

1 Most of the sub-items under this point are fairly advanced on the basis of the working document prepared by the intermediary.

2 The question will be considered within the scope defined by the New York Agreement.

5 Waiver of impunity.[3]

6 Public Security Forces:[4]

—Establishment of the NCP.[5] Doctrine. Juridical regime.

—Disbandment of the National Guard and the Treasury Police, as Public Security Forces.

—Personnel of the NCP. Vetting of National Police personnel. Enlistment of new personnel. Pluralistic and non-discriminatory selection and training system.

—Profiles and training.

—International advisory services and support.

—Transitional regime.

6 [*sic*] Intelligence services:[6]

—Disbandment of the DNI.

—Establishment of the OIE. Doctrine. Juridical regime.

—Personnel of the OIE.

—Monitoring.

7 Rapid deployment infantry battalions.

8 Subordination to the civil power.

9 Paramilitary entities:

—Civil defence.

—Regime of the Salvadorian Armed Forces reserves.

—Eradication of illegal groups.

—Regulation of private security.

—Monitoring.

10 Suspension of conscription.

11 Preventive and promotional methods.

12 Relocation and reduction.

13 International verification.

3 See "Comisión de la Verdad" (Truth Commission) in the Mexico agreements of 27 April 1991. The working paper on the Armed Forces sets forth the connection between the subject and that Commission.

4 This question has also reached an advanced stage, on the basis of an additional document prepared by the intermediary.

5 In view of the complexity of the task and the time required to carry it out, the process of organizing the new National Civil Police needs to begin immediately, i.e. without awaiting other political agreements or the cessation of the armed confrontation.

6 This question has also reached an advanced stage, on the basis of an additional document prepared by the intermediary.

II Judicial System

Implementation of the political agreements for the development of the constitutional reform adopted in the Mexico agreements of 27 April 1991.

III Electoral System

Implementation of the political agreements for the development of the constitutional reform adopted in the Mexico agreements of 27 April 1991.

IV Ratification of the Constitutional Reform

This item is inferred from the Mexico agreements of 27 April 1991. It is an indispensable prerequisite for the concretization of other political agreements, such as many of those referring to the electoral and judicial systems, as well as the agreement relating to the National Civil Police, for example. Consequently, progress should be made in that direction without further delay.

V Economic and Social Questions

VI Conditions for the Cessation of the Armed Confrontation

The work that has been done with regard to this question will have to be adapted to the arrangements for the cease-fire described above, and particularly to its dynamic character, the consequence of the compression of the negotiations.

VII Political Participation by FMLN

VIII Verification by the United Nations

IX Timetable for Implementation

New York, 25 September 1991

Representing the Government of El Salvador:
Dr. Oscar Santamaría
Col. Mauricio Ernesto Vargas
Dr. David Escobar Galindo

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Cmdr. Joaquín Villalobos

Alvaro de Soto
Representative of the Secretary-General of the United Nations

United States and Soviet Unilateral Initiatives on Nuclear Arms

Excerpts from a speech by President George Bush* Washington, 27 September 1991

. . .

If we and the Soviet leaders take the right steps, some on our own, some on their own, some together, we can dramatically shrink the arsenal of the world's nuclear weapons. We can more effectively discourage the spread of nuclear weapons. We can rely more on defensive measures in our strategic relationship. We can enhance stability, and actually reduce the risk of nuclear war.

Now is the time to seize this opportunity. After careful study and consultations with my senior advisers, and after considering valuable counsel from Prime Minister Major, President Mitterrand, Chancellor Kohl and other allied leaders, I am announcing today a series of sweeping initiatives affecting every aspect of our nuclear forces on land, on ships, and on aircraft.

I met again today with our Joint Chiefs of Staff, and I can tell you, they wholeheartedly endorse each of these steps. I'll begin with the category in which we will make the most fundamental change in nuclear forces in over 40 years: non-strategic or theater weapons.

Last year, I canceled United States plans to modernize our ground-launched theater nuclear weapons. Later, our NATO allies joined us in announcing that the alliance would propose the mutual elimination of all nuclear artillery shells from Europe as soon as short-range nuclear force negotiations began with the Soviets. But starting these talks now would only perpetuate these systems while we engage in lengthy negotiations. Last month's events not only permit, but indeed demand, swifter, bolder action.

I am therefore directing that the United States eliminate its entire worldwide inventory of ground-launched, short-range—that is, theater—nuclear weapons. We will bring home and destroy all of our nuclear artillery shells and short-range ballistic missile warheads.

We will of course ensure that we preserve an effective air-delivered nuclear capability in Europe. That is essential to NATO's security.

* A/C.1/46/10, annex.

In turn, I have asked the Soviets to go down this road with us, to destroy their entire inventory of ground-launched theater nuclear weapons, not only their nuclear artillery and nuclear warheads for short-range ballistic missiles, but also the theater systems the United States no longer has, systems like nuclear warheads for air defense missiles and nuclear land mines.

Recognizing further the major changes in the international military landscape, the United States will withdraw all tactical nuclear weapons from its surface ships and attack submarines, as well as those nuclear weapons associated with our land-based naval aircraft. This means removing all nuclear Tomahawk cruise missiles from United States ships and submarines, as well as nuclear bombs aboard aircraft carriers.

The bottom line is that under normal circumstances, our ships will not carry tactical nuclear weapons. Many of these land- and sea-based warheads will be dismantled and destroyed. Those remaining will be secured in central areas where they would be available if necessary in a future crisis.

Again, there is every reason for the Soviet Union to match our actions by removing all tactical nuclear weapons from its ships and attack submarines, by withdrawing nuclear weapons for land-based naval aircraft, and by destroying many of them and consolidating what remains at central locations.

I urge them to do so.

No category of nuclear weapons has received more attention than those in our strategic arsenals. The Strategic Arms Reduction Treaty, START, which President Gorbachev and I signed last July, was the culmination of almost a decade's work. It calls for substantial stabilizing reductions and effective verification.

Prompt ratification by both parties is essential. But I also believe the time is right to use START as a springboard to achieve additional stabilizing changes. First, to further reduce tensions, I am directing that all United States strategic bombers immediately stand down from their alert posture. As a comparable gesture, I call upon the Soviet Union to confine its mobile missiles to their garrisons, where they will be safer and more secure.

Second, the United States will immediately stand down from alert all intercontinental ballistic missiles scheduled for deactivation under START. Rather than waiting for the Treaty's reduction plan to run its full seven-year course, we will accelerate elimination of these systems once START is ratified. I call upon the Soviet Union to do the same.

Third, I am terminating the development of the mobile Peacekeeper ICBM as well as the mobile portions of the small ICBM program. The small single warhead ICBM will be our only remaining ICBM modernization program, and I call upon the Soviets to terminate any and all programs for future ICBMs with more than one warhead, and to limit ICBM modernization to one type of single warhead missile, just as we have done.

Fourth, I am cancelling the current program to build a replacement for the nuclear short-range attack missile for our strategic bombers.

And fifth, as a result of the strategic nuclear weapons adjustments that I've just outlined, the United States will streamline its command and control procedures, allowing us to more effectively manage our strategic nuclear forces.

As the system works now, the Navy commands the submarine part of our strategic deterrent while the Air Force commands the bomber and land-based elements. But as we reduce our strategic forces, the operational command structure must be as direct as possible, and I therefore approve the recommendation of Secretary Cheney and the Joint Chiefs to consolidate operational command of these forces into a United States strategic command under one commander, with participation from both services.

Since the 1970s the most vulnerable and unstable part of the United States and Soviet nuclear forces has been intercontinental missiles with more than one warhead. Both sides have these ICBMs in fixed silos in the ground where they are more vulnerable than missiles on submarines. I propose that the United States and the Soviet Union seek early agreement to eliminate from their inventories all ICBMs with multiple warheads. After developing a timetable acceptable to both sides, we could rapidly move to modify or eliminate these systems under procedures already established in the START agreement.

In short, such an action would take away the single most unstable part of our nuclear arsenals.

But there is more to do. The United States and the Soviet Union are not the only nations with ballistic missiles. Some 15 nations have them now, and in less than a decade, that number could grow to 20.

The recent conflict in the Persian Gulf demonstrates in no uncertain terms that the time has come for strong action on this growing threat to world peace. Accordingly, I am calling on the Soviet leadership to join us in taking immediate, concrete steps to permit the limited deployment of non-nuclear defenses to protect against limited ballistic

missile strikes, whatever their source, without undermining the credibility of existing deterrent forces.

And we will intensify our effort to curb nuclear and missile proliferation. These two efforts will be mutually reinforcing. To foster cooperation, the United States soon will propose additional initiatives in the area of ballistic missile early warning.

Finally, let me discuss yet another opportunity for cooperation that can make our world safer. During last month's attempted coup in Moscow, many Americans asked me if I thought Soviet nuclear weapons were under adequate control. I do not believe that America was at increased risk of nuclear attack during those tense days. But I do believe more can be done to ensure the safe handling and dismantling of Soviet nuclear weapons.

Therefore, I propose that we begin discussions with the Soviet Union to explore joint technical cooperation in three areas: first, we should explore joint technical cooperation on the safe and environmentally responsible storage, transportation, dismantling, and destruction of nuclear warheads; second, we should discuss existing arrangements for the physical security and safety of nuclear weapons, and how these might be enhanced. And third, we should discuss nuclear command and control arrangements, and how these might be improved to provide more protection against the unauthorized or accidental use of nuclear weapons.

My friend French President Mitterrand offered a similar idea a short while ago. After further consultations with the alliance, and when the leadership in the USSR is ready, we will begin this effort.

The initiatives that I'm announcing build on the new defense strategy that I set out a year ago, one that shifted our focus away from the prospect of global confrontation. We're consulting with our allies on the implementation of many of these steps, which fit well with the new post-cold war strategy and force posture that we've developed in NATO.

As we implement these initiatives, we will closely watch how the new Soviet leadership responds. We expect our bold initiatives to meet with equally bold steps on the Soviet side. If this happens, further cooperation is inevitable. If it does not, then an historic opportunity will have been lost.

. . .

Excerpts from a statement by President Mikhail Gorbachev*
Moscow, 5 October 1991

. . .

A week ago, the President of the United States, George Bush, put forward an important initiative on nuclear weapons.

We see in this initiative the confirmation that new thinking has received wide support in the international community. George Bush's proposals are a fitting continuation of the work begun at Reykjavik. That is my basic assessment. I know that Boris Yeltsin and the leaders of the other republics share this opinion.

In this statement I shall announce the steps we are taking and the proposals we are making in response.

First. The following actions will be taken with regard to tactical nuclear weapons:

—All nuclear artillery ammunition and nuclear warheads for tactical missiles will be destroyed;

—Nuclear warheads of anti-aircraft missiles will be removed from the army and stored in central bases. Part of them will be destroyed. All nuclear mines will be destroyed;

—All tactical nuclear weapons will be removed from surface ships and multi-purpose submarines. These weapons, as well as weapons from ground-based naval aviation, will be placed in central storage areas. Part of them will be destroyed.

Thus, the Soviet Union and the United States are taking radical measures on a reciprocal basis leading to the elimination of tactical nuclear weapons.

Moreover, we propose that the United States should on a reciprocal basis completely eliminate all tactical nuclear weapons from its naval forces. Also on a reciprocal basis, we could remove from active units of forward-based (tactical) aviation all nuclear ammunition (bombs and aircraft missiles) and store them in centralized bases.

* A/46/592-S/23161, annex.

The USSR calls on the other nuclear Powers to join in these far-reaching Soviet–United States measures with regard to tactical nuclear weapons.

Second. Like the United States President, I am in favour of the earliest possible ratification of the Treaty on Strategic Offensive Weapons. This issue will be discussed at the first session of the reconstituted Supreme Soviet of the USSR.

Taking into account the unilateral steps on strategic offensive weapons announced by George Bush, we shall take the following measures:

—Our heavy bombers, like those of the United States, will be taken off alert and their nuclear weapons will be stored;

—Work will be halted on the new modified short-range missile for Soviet heavy bombers;

—The Soviet Union will halt work on a mobile small intercontinental ballistic missile;

—Plans to build new launchers for intercontinental ballistic missiles on railway cars and to modernize those missiles will be abandoned. Thus, the number of our mobile intercontinental ballistic missiles with multiple individually targeted warheads will not increase;

—All our intercontinental ballistic missiles on railway cars will be returned to their permanent storage sites;

—As a step in response, we shall remove from day-to-day alert status 503 intercontinental ballistic missiles, including 134 intercontinental ballistic missiles with multiple individually-targeted warheads;

—We have already removed from active service three nuclear missile submarines with 44 launchers for submarine-based ballistic missiles and three more submarines with 48 launchers are now being removed.

Third. We have decided to make deeper cuts in our strategic offensive weapons than are envisaged in the Treaty on Strategic Offensive Weapons. As a result, at the end of the seven-year period, the remaining number of nuclear warheads in our possession will be 5,000 instead of the 6,000 envisaged under the Treaty. We would of course welcome reciprocal steps by the United States.

We propose to the United States that immediately after the ratification of the Treaty, intensive negotiations should be begun on further radical reductions in strategic offensive weapons by approximately half.

We are ready to discuss United States proposals on non-nuclear anti-aircraft systems.

We propose that we examine with the United States the possibility of creating joint systems with ground- and space-based elements to avert nuclear missile attacks.

Fourth. We declare an immediate one-year unilateral moratorium on nuclear-weapons tests. We hope other nuclear Powers will follow our example. This will open the way to the earliest possible and complete cessation of nuclear testing.

We are in favour of reaching an agreement with the United States on a controlled cessation of the production of all fissionable materials for weapons.

Fifth. We are ready to begin a detailed dialogue with the United States on the development of safe and ecologically clean technologies to store and transport nuclear warheads and methods of utilizing nuclear explosive devices and increasing nuclear safety.

To increase the reliability of nuclear-arms control we are placing all strategic nuclear weapons under single control and including all strategic defence systems in a single arm of the armed services.

Sixth. We hope that eventually the other nuclear Powers will actively join in the efforts of the USSR and the United States.

I believe the time has come for a joint statement by all the nuclear Powers renouncing a first nuclear strike. The USSR has long firmly adhered to this principle.

I am convinced that a similar step by the American side would have an enormous impact.

Seventh. We welcome the plans by the United States Administration to reduce its armed forces by 500,000 in the immediate future. On our side we intend to reduce our armed forces by 700,000.

In conclusion, I wish to stress the following: by acting in this way—unilaterally, bilaterally and through negotiations—we are decisively advancing the disarmament process and approaching the goal proclaimed at the beginning of 1986—a nuclear-free, safer and more stable world.

. . .

Responses to the United States and Soviet Unilateral Initiatives

United Nations

Statement attributable to the spokesman for the Secretary-General*

The Secretary-General warmly welcomes the timely and far-reaching announcement by President George Bush on 27 September outlining a number of measures that the United States would unilaterally take in regard to nuclear weapons and forces. The announcement comprises a most substantial set of measures that would further the process of nuclear disarmament and further de-escalate the threat of nuclear war. The steps envisaged could go a long way towards strengthening international peace and security.

The Secretary-General earnestly hopes, in addition, that discussions between the United States and the Soviet Union relating to the proposal by President Bush for the elimination of certain multiple nuclear warheads will commence as soon as possible. The success of those negotiations would be of utmost importance to the world as a whole.

Statement attributable to the spokesman for the Secretary-General**

The Secretary-General is highly appreciative of the concrete and positive response by President Mikhail Gorbachev on 5 October to President George Bush's announcement of 27 September of the United States' decision to take a number of unilateral measures with regard to nuclear weapons and forces. He hopes that these two important and dramatic initiatives will provide a new momentum to the efforts to achieve further significant reductions in their nuclear arsenals, contribute to greater stability and lead to the adoption of additional steps towards the objective of a comprehensive test ban.

* SG/SM/4626-DC/2386 of 30 September 1991.
** SG/SM/4631-DC/2388 of 7 October 1991.

Furthermore, the Secretary-General urges the other nuclear-weapon States to consider responding to President Gorbachev's invitation that they join in the bilateral effort.

China

Xinhua Press Agency
Beijing, 29 September 1991

China Welcomes Bush's Plan for Nuclear Disarmament

A Chinese Foreign Ministry spokesman stated here today that China welcomes the plan for nuclear disarmament announced by US President Bush on September 27.

The spokesman made this statement when asked by correspondents to comment on Bush's initiative for nuclear disarmament.

The spokesman said that the Chinese Government has always stood for nuclear disarmament, advocating complete prohibition and thorough destruction of nuclear weapons.

China hopes that this plan "will help realize the above-mentioned objectives", he said.

He continued, "we maintain that the United States and the Soviet Union, which possess the largest nuclear arsenals, have a special responsibility for nuclear disarmament and thus have the obligation to take the lead in halting the testing, production and deployment of nuclear weapons and substantially cutting the nuclear weapons of all types in their possession".

France

Communiqué issued by the Presidency of the Republic*
Paris, 28 September 1991

President Bush's initiative is the beginning of a watershed in nuclear disarmament.

France welcomes it and will very carefully consider both the proposed measures and the reactions they arouse.

Following on the 1987 Treaty on Soviet and American intermediate nuclear forces and the 1991 Treaty on strategic arms concluded by the United States and USSR, the proposals that have just been put forward must make it possible to speed up the reduction of the redundant nuclear arsenals.

France approves of every prospect of progress towards the reduction and effective destruction of nuclear weapons, on which she is herself ready to embark at the appropriate time according to the conditions she set out before the United Nations in September 1983.

The French plan for arms control and disarmament of 3 June 1991, the decisions taken by the President of the Republic concerning the final warning weapons and his proposal for consultations between the four powers possessing nuclear weapons in Europe on the safety of the Soviet weapons are all initiatives moving in the same direction, that of achieving greater security for all countries.

Communiqué issued by the Presidency of the Republic*
Paris, 7 October 1991

France, who was very pleased to see President Bush's proposals, warmly welcomes the Soviet Union's positive reaction and the abolition of tactical nuclear weapons proposed by Mr. Gorbachev.

* English translation provided by the Permanent Mission of France to the United Nations.

She supports the USSR President's proposal for a reduction of the Soviet and American strategic forces, which go faster and further than those envisaged in the START agreement.

France considers it necessary to avoid a destabilizing new arms race in the missile defence sphere. She will study with interest the points in the Soviet President's proposal which seem to have this aim in view.

Finally, France notes with satisfaction that the Soviet Union and United States are genuinely embarking on the path of the minimum deterrent strategy that she advocates. She confirms that, at the appropriate moment, she will take her part in the nuclear disarmament process.

United Kingdom

Statement by Prime Minister John Major*

Nuclear Initiative

These are far-reaching proposals. The President and I both want to seize this opportunity to achieve a safer world. I trust that President Gorbachev and President Yeltsin will respond with equal imagination. If they do it will be a turning point in our history, bringing enormous benefits for mankind. We have a unique chance to maintain our security at much lower levels of nuclear weapons and to ensure that those weapons that remain stay under the tightest control.

For some time we have been consulting with our American and other allies how we can best consolidate the historic changes which have occurred in Eastern Europe and the Soviet Union. We all agreed that we should take further imaginative steps in arms control while preserving the essentials of our defence in a world which is still unstable. These consultations have borne fruit in the bold initiative just announced by President Bush.

I would stress three points:

i First, the enormous strides we are making in arms control have been made possible by the policies of NATO: policies based on sound defence and solidarity, rather than pacifism and unilateralism. We will need NATO and the habit of consulting with allies as much in the future as in the past if we are to capitalise on the hopeful trends now before us.

ii Second, the aim is to keep only the minimum of nuclear weapons needed to make sure that Europe never again faces large-scale war: adequate conventional and nuclear forces remain the bedrock of our security. The Government will ensure that Britain retains both.

* Press release of 30 September 1991 issued by the United Kingdom Mission to the United Nations.

iii Third, these moves, exciting though they are, do not exhaust the possibilities. The Government's agenda has other important arms control initiatives on it: including an arms transfers register, a ban on chemical weapons and a programme to ensure that the weapons we are controlling or banning in Europe do not spread to countries elsewhere in the world.

Text of a doorstep interview given by Prime Minister John Major*
6 October 1991

Nuclear Weapons Cuts: The Soviet Response

The Prime Minister:

When President Bush announced his proposals a week or so ago, I said that if Gorbachev responded in like fashion then it could well be a turning point in the peace process. We have now had a response from President Gorbachev. At first sight it does seem to be a very comprehensive response, and that is very welcome.

If it is what it seems to be, then there may be a unique opportunity to see a dramatic de-escalation in nuclear weapons.

I welcome that very much, and we would want very carefully to study the proposals that have been laid out before us. I think there are several points to make about this. Firstly, what has happened today is an absolute vindication of NATO strategy over recent years. Had the West not held to that strategy, I very much doubt that we would have seen the remarkable events of recent weeks. Secondly, although these announcements are very welcome indeed, I believe we do have to bear in mind that the Soviet Union still remains a very large military and nuclear power, and we would want to look very carefully to see how these matters develop.

Question:

Does this mean that you would consider making further cuts in Britain's arsenal, and in particular reconsider Trident?

Prime Minister:

No, I don't believe that would be an appropriate response. We have made reductions in our own nuclear weapons over recent weeks, and we have announced those. The Trident is the essential minimum

* Policy Statement 64/91 of 7 October 1991, issued by British Information Services.

defence that we need in this country, and we must maintain Trident. The Soviet Union, despite those very welcome reductions, are still an immense nuclear power and immense military power, and we need that essential deterrent that Trident provides, and we will keep it.

Question:

And the question of nuclear testing?

Prime Minister:

Well, we will study very carefully all the proposals in the Soviet Union plans. I think at this stage it is wise to examine them carefully before we respond.

Closing Communiqué of the Meeting of the Five on Arms Transfers and Non-Proliferation London, 17-18 October 1991

In accordance with their agreement in Paris on 8 and 9 July 1991, representatives of the United States of America, the People's Republic of China, France, the United Kingdom of Great Britain and Northern Ireland, and the Union of Soviet Socialist Republics met in London on 17 and 18 October to take forward their discussions on issues related to conventional arms transfers and to the non-proliferation of weapons of mass destruction.

Recalling the statement which was issued in Paris on 9 July, they:

Agreed common guidelines for the export of conventional weapons (annexed). They expressed hope that other arms exporting countries will adopt similar guidelines of restraint;

Agreed to inform each other about transfers to the region of the Middle East, as a matter of priority, of tanks, armoured combat vehicles, artillery, military aircraft and helicopters, naval vessels, and certain missile systems, without prejudice to existing commitments to other Governments;

Agreed to make arrangements to exchange information for the purpose of meaningful consultation, bearing in mind their shared concern to ensure the proper application of the agreed guidelines, and to continue discussions on how best to develop these arrangements on a global and regional basis in order to achieve this objective;

Welcomed work at the United Nations General Assembly on the early establishment of a UN register of conventional arms transfers, and supported the current consultations on this issue between a wide range of UN members in which they are actively participating. They called for universal support for this work;

Noted the threats to peace and stability posed by the proliferation of nuclear weapons, chemical and biological weapons, missiles, etc., and undertook to seek effective measures of non-proliferation and arms control in a fair, reasonable, comprehensive and balanced manner on a global as well as a regional basis. They reaffirmed the importance of maintaining stringent and, as far as possible, harmonized guidelines for exports in this area. They embarked on a comparison of their national export controls on equipment related to weapons of mass destruction and agreed to examine the scope for further harmonization of those

controls. They agreed to pursue discussions at their next meeting on these subjects;

Agreed to continue discussing the possibilities for lowering tension and arms levels, including the development of further measures of restraint concerning arms transfers and ways of encouraging regional and global efforts towards arms control and disarmament;

Agreed to continue to give these efforts high priority and meet again in the new year in the United States to take forward their discussions, and to meet regularly thereafter at least once a year.

Agreed Guidelines on Conventional Arms Transfers

The People's Republic of China, the French Republic, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America,

Recalling and reaffirming the principles which they stated as a result of their meeting in Paris on 8 and 9 July 1991,

Mindful of the dangers to peace and stability posed by the transfer of conventional weapons beyond levels needed for defensive purposes,

Reaffirming the inherent right to individual or collective self-defence recognized in Article 51 of the Charter of the United Nations, which implies that States have the right to acquire means of legitimate self-defence.

Recalling that in accordance with the Charter of the United Nations, UN member States have undertaken to promote the establishment and maintenance of international peace and security with the least diversion for armaments of the world's human and economic resources,

Seeking to ensure that arms transferred are not used in violation of the purposes and principles of the UN Charter,

Mindful of their special responsibility for the maintenance of international peace and security,

Reaffirming their commitment to seek effective measures to promote peace, security, stability and arms control on a global and regional basis in a fair, reasonable, comprehensive and balanced manner,

Noting the importance of encouraging international commerce for peaceful purposes,

Determined to adopt a serious, responsible and prudent attitude of restraint regarding arms transfers,

Declare that, when considering under their national control procedures conventional arms transfers, they intend to observe rules of restraint, and to act in accordance with the following guidelines:

1 They will consider carefully whether proposed transfers will:

a Promote the capabilities of the recipient to meet needs for legitimate self-defense;

b Serve as an appropriate and proportionate response to the security and military threats confronting the recipient country;

c Enhance the capability of the recipient to participate in regional or other collective arrangements or other measures consistent with the Charter of the United Nations or requested by the United Nations;

2 They will avoid transfers which would be likely to:

a Prolong or aggravate an existing armed conflict;

b Increase tension in a region or contribute to regional instability;

c Introduce destabilizing military capabilities in a region;

d Contravene embargoes or other relevant internationally agreed restraints to which they are parties;

e Be used other than for the legitimate defense and security needs of the recipient State;

f Support or encourage international terrorism;

g Be used to interfere with the internal affairs of sovereign States;

h Seriously undermine the recipient State's economy.

Statement by the Verkhovna Rada of Ukraine on the Non-Nuclear Status of Ukraine*
24 October 1991

Confirming the intention of Ukraine, proclaimed in the Declaration of State Sovereignty of Ukraine of 16 July 1990, to adhere to the three non-nuclear principles: not to accept, not to produce and not to acquire nuclear weapons,

Recognizing the necessity of strict observance of the Treaty on the Non-Proliferation of Nuclear Weapons of 1968,

Seeking to contribute towards the strengthening of the international regime of the non-proliferation of nuclear weapons,

The Verkhovna Rada of Ukraine states:

1 The presence of the nuclear weapons of the former Union of Soviet Socialist Republics on the territory of Ukraine is temporary.

2 Now these weapons are under control of the corresponding structures of the former Union of Soviet Socialist Republics.

Ukraine insists on the right of its control over the non-use of nuclear weapons located on its territory.

3 Ukraine shall follow the policy aimed at the comprehensive elimination of nuclear weapons and components of their deployment located on the territory of the Ukrainian State. It intends to achieve it in the shortest time possible taking into account legal, technical, financial, organizational and other possibilities and with the proper securing of ecological safety.

In Ukraine there will be launched the wide programme of conversion of the defence industry, re-aiming the part of the military industrial capability towards the needs of economic and social development.

4 Ukraine, as one of the successors of the former Union of Soviet Socialist Republics, shall fulfil the provisions of the Treaty on the Reduction of Strategic Offensive Weapons of 1991 in the part that concerns the nuclear weapons located on its territory.

Ukraine is ready to start negotiations with the Republic of Belarus, the Kazakh SSR, the Russian SFSR with the participation of the corresponding structures of the former Union of Soviet Socialist

* A/C.1/46/12, annex.

Republics on the elimination of strategic nuclear weapons covered by this Treaty.

5 Ukraine shall take steps aimed at eliminating all other nuclear weapons located on its territory and for this matter is ready, as necessary, to participate in negotiations with all interested parties, including existing multilateral mechanisms in the field of disarmament.

6 Ukraine shall take appropriate steps to secure all the time until the complete elimination of these weapons the physical safety of nuclear weapons located on its territory.

7 Ukraine intends to adhere to the Treaty on the Non-Proliferation of Nuclear Weapons as a non-nuclear State and to conclude with the International Atomic Energy Agency a corresponding agreement on guarantees.

Recent Books and Articles

Adelman, Kenneth L. and Norman R. Augustine. *The Defense Revolution: Strategy for the Brave New World by an Arms Controller and an Arms Builder*. San Francisco, California, Institute for Contemporary Studies Press, 1990. 239 p.

Written by an arms controller—Kenneth L. Adelman—and an arms builder—Norman R. Augustine—*The Defense Revolution* discusses options for the United States in the post-cold-war era and how the United States could reform its defence forces in the light of the new security situation. The book examines the United States defence budget and suggests ways to reduce it without reducing American security. The authors expose fraud, waste and abuse in the defence industry and outline the many procedures with which the Pentagon must comply in procuring military equipment.

The book concludes with a series of "memoranda" addressed to major figures—including the President of the United States, the President of the Soviet Union, and the "US defense industry"—which contain key points and recommendations on how best to ensure security in the unpredictable years ahead.

Bischak, Gregory A., ed. *Towards a Peace Economy in the United States: Essays on Military Industry, Disarmament and Economic Conversion*. New York, St. Martin's Press, 1991. 248 p.

Focusing on the United States, Gregory Bischak has brought together a diverse group of individuals to examine the question of what will become of the United States permanent war economy in the post-cold-war era. In the book's introductory chapter, Seymour Melman, a well-known advocate of conversion, argues that "democratic conversion planning is an essential step in the economic and political renewal of the United States".

The book is divided into three sections: an analysis of the effects of military-oriented high technology policies, theoretical and empirical issues of military economy, and efforts towards a peace economy.

Boulden, Jane. "Building on the past: future directions for peacekeeping", *Behind the Headlines*, Canadian Institute for International Affairs, vol. 48, No. 4/Summer 1991. 17 p.

In this monograph, the author addresses the need to build peace, not simply to keep it. The recent new types of peace-keeping operations undertaken by the United Nations and the use of military force in the Persian Gulf under its auspices mark a qualitative change in the traditional role played by the United Nations in this field. After examining the evolution of peace-keeping, the author looks at possible future directions, including involvement in pre-conflict stages and in domestic sources of conflict, and in naval peace-keeping.

Bunn, George, Charles N. Van Doren and David Fischer. *Options & Opportunities: The NPT Extension Conference of 1995*. Southampton, United Kingdom, Mountbatten Centre for International Studies, 1991. 40 p. (Programme for Promoting Nuclear Non-Proliferation Study Number Two)

The cornerstone of the existing international nuclear non-proliferation regime is the nuclear non-proliferation Treaty (NPT), under which States have pledged not to acquire nuclear weapons and to accept IAEA safeguards over all their nuclear materials. This Treaty is not automatically of indefinite duration: in 1995 a conference will be convened to decide whether the Treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. This study constitutes a "detailed attempt to explore the procedural minefield surrounding the NPT extension conference."

In the study's first chapter, "Options for extension of the NPT: the intention of the drafters of article X.2", George Bunn and Charles N. Van Doren, who were involved in negotiating the Treaty, consider the options facing the parties. A second chapter by David Fischer, a former IAEA official, entitled, "Article X.2 of the Nuclear Non-Proliferation Treaty and the nature of its 1995 extension conference", is an analytical piece meant to complement the contextual chapter.

The three authors observe that whether the treaty is prolonged for one fixed period or for a determined number of fixed periods it will in the end inevitably expire. Against that background the possibility is discussed of an extension for an indefinite series of fixed periods of equal length, which would succeed each other automatically unless there was a majority decision on termination at the end of one of the periods.

Chin, Kin Wah, ed. *Defence Spending in Southeast Asia*. Singapore, Institute of Southeast Asian Studies, 1990. 326 p.

Defence Spending in Southeast Asia, originally published in 1987, contains papers prepared for the first phase of a three-part project on defence and development sponsored by the Regional Strategic Studies Programme of the Institute for South-East Asian Studies in Singapore. The aim of the Institute is to seek better understanding of the defence policies and military establishments of nations in the south-east Asian region and their bearing on national and regional well-being.

The book's main focus is an assessment of expenditures for conventional defence forces in the region. It provides a general overview of the subject and includes eight country studies (Brunei Darussalam, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam).

The editor concludes that "a concern of regional governments is not so much the issue of defence *or* development, but rather, the problem of how to keep a balance between defence *and* development".

Cimbala, Stephen J. *Strategy after Deterrence*. New York, Praeger, 1991. 267 p.

The author considers the ways American military priorities will have to change following the military and political changes in Eastern Europe and the Soviet Union. He discusses the options available to the United States and NATO, drawing on literature of Soviet and United States defence strategy.

He examines the relationship between military stability and the likelihood of winning a possible war at an early stage, analyses the issue of using deterrence during war and the potential for "a-typical" wars in the future. After addressing the question of replacing nuclear deterrence with non-nuclear dissuasion, he argues that dissuasive threats not based on the terror of nuclear weapons may not be sufficiently convincing and that, in the case of conventional dissuasion, "occasional forceful demonstrations" may be needed.

In his concluding observations, the author discusses the role of arms-limitation and confidence-building regimes in "modifying the contract" by which societies hold each other hostage through deterrence.

Cordesman, Anthony H. *Weapons of Mass Destruction in the Middle East*. London, Brassey's for the Royal United Services Institute for Defence Studies, 1991. 224 p.

Based on unclassified sources and interviews with regional experts, Anthony Cordesman provides a scholarly view of current developments in the Middle East. Published after Iraq's invasion of Kuwait, the book reviews patterns in the flow of conventional arms in the region and analyses current trends in the parallel proliferation of weapons of mass destruction. The book includes a tabulated country-by-country listing of weapons acquisitions resulting from regional conflicts in the Middle East.

The author also discusses the impact of Middle East arms sales on arms control policy and the power projection of individual countries in the region. He does not see arms control in the Middle East as an easy process and expects many setbacks and delays to take place before sweeping agreements requiring simultaneous efforts by all parties can be achieved.

Corradini, Alessandro. *The Verification of Disarmament Agreements*. Firenze, Italy, Forum per i Problemi della Pace e della Guerra, 1991. 29 p. (Quaderni Forum Anno 5 - N. 1)

The author, a former director at the United Nations Centre for Disarmament, observes that verification has become an integral part of arms limitation and disarmament agreements and that, in the interest of security, compliance with such agreements must be verifiable. Although the task of identifying acceptable and reliable measures at a sufficiently high level of verifiability can present challenging difficulties and has occasionally proved to be a serious obstacle to the conclusion of disarmament accords, the author points to the experience of the past thirty years that indicates that when the negotiating parties were firmly decided to reach agreement on substantive disarmament measures, they were able to find solutions to the problem of verification that were, at least at that time, satisfactory to them. A large number of agreements, bilateral or multilateral,—from the non-proliferation Treaty (1968) to the United States-USSR Treaty on the elimination of intermediate- and shorter-range missiles (1987) and the Treaty on Conventional Armed Forces in Europe (1990)—provide, in the view of the author, evidence that, even when stringent criteria of national security are applied, verification is not an insurmountable obstacle to disarmament.

As the great majority of multilateral arms limitation and disarmament agreements currently in force provide a role for the United Nations in ensuring compliance, the author considers that an enhanced United Nations capability to assist in verification, with the consent of all States parties to such agreements, could be a significant contribution to international cooperation and security. The publication provides an extensive chart of provisions in existing arms limitation and disarmament treaties relating to verification and compliance.

Dahlitz, Julie and Detlev C. Dicke, eds. *The International Law of Arms Control and Disarmament* (United Nations publication, Sales No. G.V.E. 91.0.14). 244 p.

Edited by Julie Dahlitz, Australian D. Juris, Barrister and Solicitor, and Detlev C. Dicke, Dean of the Law Faculty of Switzerland's University of Fribourg, the book contains a collection of 15 articles covering a broad range of legal issues that have so far been largely unexplored. While primarily for government officials, it is also seen as essential for advanced academic study in international law, international relations and political science. In addition to articles by the two editors, contributions to the work have also been made by Yasushi Akashi, United Nations Under-Secretary-General for Disarmament Affairs, Jiuyong Shi, Chairman of the International Law Commission, and Miljan Komatina, the Secretary-General's Personal Representative to the Conference on Disarmament.

The 15 papers in the book were originally presented at a symposium in Geneva at the beginning of 1991. They include: a thorough examination of treaty law on the limitation and prohibition of weapons; the negotiations, application and evolution of arms control treaties; their place in the universal system of international law; the applicability of multilateral arms control treaty provisions between parties in armed conflict against each other; institutional underpinnings; proposals for law reform; references to the post-Gulf war arms control era; and problems of State succession regarding arms control treaties in case of dissolution or amalgamation of States; and a summary of discussions at the symposium.

Epstein, Joshua M. *Conventional Force Reductions: A Dynamic Assessment*. Washington, D.C., The Brookings Institution, 1990. 275 p.

Conventional Force Reductions focuses on recent arms control achievements in Europe, such as unilateral force reductions by the former Warsaw Treaty Organization, the signing of the Treaty on

Conventional Armed Forces in Europe (CFE) and negotiations currently under way for a CFE II treaty to reduce conventional forces in Europe even further. The author's intention is to present data and analytical tools that will aid readers in exploring a wide range of possible future security arrangements in Europe.

Using a dynamic model of warfare which he developed, the author analyses the current military balance and shows how these major arms control achievements could progressively improve NATO's security posture, while still allowing the United States to reduce its conventional forces in Europe.

An extended version of his original adaptive dynamic model for conventional war, which first appeared in 1985, and extensive data in tabular form are included as annexes.

Franco Angeli, ed. *Il Commercio delle Armi: per un controllo nei trasferimenti internazionali di armamenti*. Milano, Forum per i problemi della pace e della guerra, 1991. 223 p.

This is the Italian version of the United Nations publication *Transparency in International Arms Transfers* (Disarmament Topical Paper 3), a collection of papers by international experts examining transparency and confidence-building, the promotion of restraint, and emerging trends and future possibilities with respect to transfers. The Italian version has been published by the Forum per i problemi della pace e della guerra, which in 1990 cooperated with the United Nations in organizing the symposium at which the papers were presented.

The Future of NATO: Facing an Unreliable Enemy in an Uncertain Environment. By Drew S. Nelson and others. New York, Praeger, 1991. 206 p.

The book, written by five senior officers in the United States Armed Forces, assesses the relevance of NATO military strategy and attempts to provide an answer to the question: "How will NATO meet its defence needs as it makes the transition to a post-cold-war European security environment?" The book explores not only the political elements of NATO military strategies, but also studies the interrelationship of political, economic and military factors underpinning Western security.

Believing that the United States has a vested interest in finding a defence posture for NATO, the authors offer "resilient defence" as a logical replacement for "forward defence". This strategy, they believe, would maintain conventional defence capability by making more effi-

cient use of lower levels of forces and would accommodate the pressures for reduced defence spending in the face of a reduced military threat.

Gold, Dore, ed. *Arms Control in the Middle East*. Boulder, Colorado, Westview Press for the Jaffee Center for Strategic Studies of Tel Aviv University, 1990. 160 p.

The book is based on a collection of essays by a distinguished international group of academic, diplomatic, military and political experts from Germany, Israel and the United States, which were presented at a seminar held at the Jaffee Center for Strategic Studies in December 1989. The seminar was organized to consider major themes of arms control in Europe and how they can be applied in the Middle East region.

Dore Gold, the book's editor and current director of the Jaffee Center's Project on United States Foreign and Security Policy in the Middle East, observes that if "Middle East arms control talks ever become a reality they will have to deal simultaneously with several categories of weapon systems, much in the same way that the superpower talks in Europe did during the 1980s".

Grin, John and Henry van der Graaf, eds. *Unconventional Approaches to Conventional Arms Control Verification: An Exploratory Assessment*. New York, St. Martin's Press, 1990. 277 p.

Published in association with the Centre for Verification Technology, in Amsterdam, the book proposes ways to structure and institutionalize a future verification regime. The book comprises an extensive introduction, a look at organizational options for conventional arms control verification from three perspectives—East, West and neutral—and an examination of the system components of a verification regime. Throughout the book, three "unconventional" approaches to conventional arms control verification are explored: an all-European verification system; the verification of the (offensive and defensive) structure of armed forces; and the verification of production, and research and development facilities.

In assessing options for the elaboration of a verification regime for a follow-on agreement to the Treaty on Conventional Armed Forces in Europe, the editors conclude that "the revolutionary new situation in Europe requires new approaches to arms control and verification" and that the approaches studied in the book need to be taken into consideration at the next round of conventional arms control talks.

Jasani, Bhupendra. *European Arms Control: Verification from Space*. Hamburg, Germany, Institut für Friedensforschung und Sicherheitspolitik, 1990. 64 p. (Hamburger Beiträge, Heft 51)

The book deals with the question of verification of compliance with arms control treaties in which observation from space—the only method that provides rapid monitoring of a large area—plays a key role. This method enables States to detect undeclared new facilities, weapon systems or even their development, and thus becomes a powerful instrument for triggering further investigation. The book discusses and compares existing verification systems, such as on-site inspections and observation from space and from aircraft, and it also outlines some new techniques. Additionally, European space capabilities, like space transportation, sensors, spacecraft and communication satellites, are summarized.

Jervis, Robert and Jack Snyder, eds. *Dominoes and Bandwagons: Strategic Beliefs and Great Power Competition in the Eurasian Rimland*. New York, Oxford University Press, 1991. 299 p.

This scholarly study, edited by two professors of political science at Columbia University, New York, examines the roles that the "domino theory" and "bandwagoning" play in super-Power strategic beliefs and what will become of these strategies as the cold war ends.

Four contributors assess the psychological and domestic political factors contributing to American beliefs about "falling" dominoes, while another four examine the Soviet perspective of this theory.

Kegley, Charles W. and Kenneth L. Schwab, eds. *After the Cold War: Questioning the Morality of Nuclear Deterrence*. Boulder, Colorado, Westview Press, 1991. 276 p.

After the Cold War is a collection of papers presented at a conference convened at the University of South Carolina in February 1990. The conference, which sought to address the fundamental strategic issues presented by the new global environment and take a critical look at the morality of nuclear deterrence in the post-cold-war period, brought together experts, many of whom had published on nuclear deterrence in the 1980s but had rarely discussed their differences face to face.

The book examines the views of policy makers and strategists, policy analysts and peace researchers, and moral philosophers and religious leaders. The final section looks at new thinking about old questions and links the book's two main themes, offering a historical perspective of nuclear deterrence and a look at the post-cold-war period.

The book includes a comprehensive bibliographic review of literature on nuclear deterrence.

Markland Policy Group. *Disarmament's Missing Dimension: A U.N. Agency to Administer Multilateral Treaties*. Toronto, Science for Peace, 1990. 149 p.

After drawing attention to the present trend towards the signing of specific-scope treaties such as a chemical weapons convention, the Markland Policy Group authors argue that a single verification agency under United Nations auspices should be established as a multi-treaty agency. The book also describes and discusses the verification system and organization envisaged for the chemical weapons convention now being negotiated in the Geneva-based Conference on Disarmament.

Martin, Mathias. *Sowjetische Sicherheitspolitik und Kollektive Sicherheit 1917-1990* (Soviet Security Policy and Collective Security). Hamburg, Germany, Institut für Friedensforschung und Sicherheitspolitik, 1990. 58 p. (Hamburger Beiträge, Heft 52)

Believing that the Soviet concept of a collective European security system has been misinterpreted, Mathias Martin seeks to define its elements by analysing recent speeches of the Soviet Foreign Ministry and military experts. The Soviet attitude towards such a concept is reviewed in its historical context to find out under what circumstances and why the Soviet Union has considered the concept, and how it has defined it. The author then examines the thesis that Soviet security policy always aimed at establishing a system of collective security. He argues that Soviet proposals did not contain the essential elements of a collective security system, and claims that this was due to the fact that the Soviet Union was trying to break out of isolation and diminish United States influence in Europe.

Mrázek, Josef. *Právo mezinárodni bezpecnosti a odzbrojeni* (International Security and Disarmament Law). Prague, Academia Praha, 1990. 416 p.

The book focuses on the legal problems of international peace, security and disarmament, taking into account the many changes that international law has undergone in the present period. It is divided into three main sections. The first, dealing with the global international legal order and the international system, focuses on the work of the United Nations International Law Commission; the second, examining international law and problems of international peace, security and disarmament, draws heavily on discussions in the United Nations; and the third, on the regulation of armaments, problems of disarmament and prohibition of weapons in the light of international law, devotes much space to the question of various types of arms control and disarmament measures. The book contains a summary in English, on which this outline is based.

Pratt, Erik K. *Selling Strategic Defense: Interests, Ideologies and the Arms Race*. Boulder, Colorado, Lynne Rienner Publishers, 1990. 177 p.

Selling Strategic Defense focuses on those individuals and groups that, since 1945, have attempted to "sell" the United States Government and the American public on the idea of strategic defence. The author includes an in-depth examination of the concept of strategic defence from 1945 to 1972, and traces the evaluation of the United States ballistic missile defence programme and its relationship to the anti-ballistic missile Treaty.

The author attempts to show how diverse but compatible interests are combined with and/or coordinated to sell a favourite weapons system to the United States Government and, in turn, the American public. In exposing the politics of strategic defence, the author not only examines the national security decision-making process involved, but also focuses on the political, social and economic interests which underlie the selection of particular weapons systems.

Rabow, Gerald. *Peace Through Agreement: Replacing War with Non-Violent Dispute-Resolution Methods*. New York, Praeger, 1990. 189 p.

The author uses his experience as a systems engineer to formulate a plan for the peaceful resolution of disputes between nations. He develops a "cooperation theory", derived from the theory of non-zero-

sum games, and illustrates, through the playing of such games, how conflict resolution is achieved in a controlled setting. In the book's penultimate chapter, the author presents a scheme for arbitrating major international disputes and concludes that "arbitration is the best way of resolving problems that are otherwise unsolvable by peaceful means, but which must be resolved".

Schulte, Ludwig. *Trumpf der Verteidigung: Mehr Stabilität durch moderne Technologien*. (The Trump Card in Defence: Greater Stability through Modern Technologies). Baden-Baden, Germany, Nomos Verlagsgesellschaft 1990. 176 p.

Schulte, believing that the Western strategy of nuclear deterrence in its present form is no longer credible, examines recently developed technologies to maintain international stability without nuclear deterrence, such as counterforce technologies in the field of reconnaissance and modern conventional weaponry. The book not only provides information about new military developments, but also surveys recent changes in nuclear strategies, with particular reference to the Strategic Defense Initiative. The author emphasizes the need to develop policies of security to reinforce defence. Against this background, he discusses new prospects for European security.

Sharp, Gene. *Civilian-Based Defense: a Post-Military Weapons System*. Princeton, New Jersey, Princeton University Press, 1990. 165 p.

Gene Sharp, President of the Albert Einstein Institute and a leading pioneer in the development of civilian-based defence, describes, in his new book on the subject, how the results of his studies on non-violent struggle can be applied to the problems of deterrence and defence. He outlines a deliberately developed, post-military defence policy to support his claim that civilian-based defence can be a realistic choice in the coming decades.

Sherwood, Elizabeth D. *Allies in Crisis: Meeting Global Challenges to Western Security*. New Haven, Connecticut, Yale University Press, 1990. 245 p.

In her book *Allies in Crisis*, Elizabeth D. Sherwood disputes the belief that NATO has unsuccessfully coped with what the author considers to be its greatest challenges—those coming from "out-of-area"

conflicts, e.g., the Korean War, and the Persian Gulf conflict. Citing a carefully chosen series of case studies, the book attempts to clarify the reader's understanding of Western crisis management in the third world and looks at the relationship between global developments and alliance security by focusing on the foreign and defence policies of the United States, the United Kingdom and France. The author concludes that NATO has dealt with "out-of-area" crises on an ad hoc basis through informal consultations and coordination among its interested members. This process has given rise to what she calls a "shadow alliance", which she considers "one of the unrecognized strengths" of NATO.

Yavar, Yerma. *Entre la Guerra y la Paz: La Situación Estratégico-Militar en América Latina en 1988* (Between War and Peace: The Strategic-Military Situation in Latin America in 1988). Santiago, Chile, Facultad Latinamericana de Ciencias Sociales, May 1990. 258 p. (Documento de Trabajo Programa FLACSO-Chile Número 449)

Entre la Guerra y la Paz: La Situación Estratégico-Militar en América Latina en 1988, prepared by Yerma Yavar and issued as a document of the Latin American Faculty of Social Sciences (FLACSO), is a systematized, monthly, country-by-country chronology of events in the military-strategic sphere which occurred in Latin America and the Caribbean during 1988. Topics covered include: regional efforts to reach a firm and lasting peace in Central America in accordance with Esquipulas II; regional efforts to reach agreement on the peaceful uses of nuclear energy; the situation in Panama; regional integration in the arms industries; and the intra-regional arms trade.

FLACSO is an international organization created in 1957 to promote social science research and training through the activities of its academic centres located throughout Latin America. The above-mentioned publication is a product of its Chilean programme, whose primary fields of research include disarmament, arms control, international security and military sociology.

Further Publications

Disarmament is unable to publish summaries of all books and articles sent to the Editor. The following is a list of items received recently.

Beck, Harald. *Much Ado About Nothing? The Verification System of the South Pacific Nuclear Free Zone Treaty*. Canberra, Peace Research Centre, Australian National University, June 1991. 24 p. (Working Paper No. 109)

Blechman, Barry, William J. Durch and Kevin P. O'Prey. *Regaining the High Ground: NATO's Stake in the New Talks on Conventional Armed Forces in Europe*. New York, St. Martin's Press, 1990. 217 p.

Boulden, Jane. *Phase I of the Strategic Defense Initiative: Current Issues, Arms Control and Canadian National Security*. Ottawa, Canadian Centre for Arms Control and Disarmament, 1990. 19 p. (Issue Brief 12)

Brzoska, Michael. *Militarisierungsdynamik, militante Konflikte und Entwicklungsdynamik*. Bonn, Institut für Politische Wissenschaft, 1990. 15 p. (Arbeitspapiere 40)

Chauvistré, Eric. *Germany and Proliferation: The Nuclear Export Policy*. Berlin, Arbeitspapiere der Berghof-Stiftung für Konfliktforschung, 1991. 48 p. (Nr. 43)

Chun, Kin-Yip. *Nuclear Test Ban Verification: Recent Canadian Research in Forensic Seismology*. Ottawa, Canada, Arms Control and Disarmament Division, External Affairs and International Trade Canada, July 1991. 38 p. (Arms Control Verification Occasional Papers No. 8)

Dalby, Simon. *Rethinking Security: Ambiguities in Policy and Theory*. Canberra, Peace Research Centre, Australian National University, April 1991. 34 p. (Working Paper No. 105)

Dockrill, Saki. *Britain's Policy for West German Rearmament 1950-1955*. Cambridge, United Kingdom, Cambridge University Press, 1991. 209 p. (Cambridge Studies in International Relations: No. 13)

Dorn, A. Walter. *The Case for a United Nations Verification Agency: Disarmament under Effective International Control*. Ottawa, Canadian Institute for International Peace and Security, July 1990. 41 p. (Working Paper 26)

Dumoulin, André, and Eric Remacle. *Le traité sur les forces conventionnelles en Europe*. Paris, Groupe de Recherche et d'Information sur la Paix, février-mars 1991. 70 p. (Dossier "notes et documents", No. 154-155)

Findlay, Trevor. *The Making of a Moral Ornament: Australian Disarmament and Arms Control Policy 1921-1991*. Canberra, Peace Research Centre, Australian National University, May 1991. 17 p. (Working Paper No. 107)

Findlay, Trevor. *Southeast Asia, the South Pacific and the Chemical Weapons Convention*. Canberra, Peace Research Centre, Australian National University, May 1991. 16 p. (Working Paper No. 106)

Foerster, Schuyler, and Edward N. Wright, eds. *American Defence Policy*, 6th edition. Baltimore, Maryland, Johns Hopkins University Press, 1990. 654 p.

The Future of US Nuclear Weapons Policy: A Symposium. San Diego, California, Institute on Global Conflict and Cooperation at the University of California, 1990. 87 p. (IGCC Studies in Global Conflict and Cooperation, volume 1)

Glantz, David. *Future Soviet Military Strategy*. Sandhurst, Soviet Studies Research Centre, December 1990. 12 p.

Grin, John. *Military-Technological Choices and Political Implications: Command and Control in Established NATO Posture and a Non-Provocative Defence*. New York, St. Martin's Press, 1990. 349 p.

Hay, Robin. *NATO's Short-Range Nuclear Forces: Weapons in Search of a Purpose*. Ottawa, Canadian Centre for Arms Control and Disarmament, 1991. 15 p. (Issue Brief 13)

Henningham, Stephen and Desmond Ball, eds. *South Pacific Security: Issues and Perspectives*. Canberra, Australia, Strategic and Defence Studies Centre, Australian National University, 1991. 155 p. (Canberra Papers on Strategy and Defence No. 72)

Hill, Roger. *Framework for a New Canadian Defence Policy*. Ottawa, Canadian Institute for International Peace and Security, June 1991. 60 p. (Working Paper 35)

Hughes, Peter C. *Satellites Harming Other Satellites*. Ottawa, Canada, Arms Control and Disarmament Division, External Affairs and International Trade Canada, July 1991. 51 p. (Arms Control Verification Occasional Papers No. 7)

Institute for Foreign Policy Analysis. *Sixth International Roundtable Conference: Change in Europe and the Emergence of New Strategic Priorities: Restructuring Security Arrangements for the 1990s*. Washington, D.C., 1991. 45 p.

International Institute for Strategic Studies. *Strategic Survey 1990-1991*. London, May 1991. 276 p.

Kaufman J., David S. Clark and Kevin P. Sheehan, eds. *US National Security Strategy for the 1990s*. Baltimore, Maryland, Johns Hopkins University Press, 1991. 273 p.

Kelsay, John, and James Turner Johnson, eds. *Just War and Jihad: Historical and Theoretical Perspectives on War and Peace in Western and Islamic Traditions*. New York, Greenwood Press, 1991. 254 p. (Contributions to the Study of Religion No. 28)

Langtry, J. O. and Desmond Ball, eds. *The Northern Territory in the Defence of Australia: Strategic and Operational Considerations*. Canberra, Australia, Strategic and Defence Studies Centre, Australian National University, 1991. 340 p. (Canberra Papers on Strategy and Defence No. 73)

Luckham, Robin. *The Military, the Developmental State and Social Forces in Asia and the Pacific: Issues for Comparative Analysis*. Canberra, Peace Research Centre, Australian National University, April 1991. 45 p. (Working Paper No. 104)

Mack, Andrew. *Security Regimes for the Oceans: The Tragedy of the Commons, the Security Dilemma and Common Security*. Canberra, Peace Research Centre, Australian National University, February 1991. 15 p. (Working Paper No. 102)

Mazarr, Michael J. *START and the Future of Deterrence*. New York, St. Martin's Press, 1991. 257 p.

Remacle, Eric. *Les Négociations sur la politique étrangère et de sécurité commune de la Communauté européenne*. Paris, Groupe de

Recherche et d'Information sur la Paix, avril 1991. 35 p. (Dossier "notes et documents", No. 156)

Stanley Foundation. *The United Nations: Structure and Leadership for a New Era: 22nd UN Conference 1991*. Muscatine, Iowa, 1991. 25 p.

Stuart, Douglas, and William Tow. *The Limits of Alliance: NATO Out-of-Area Problems Since 1949*. Baltimore, Maryland, Johns Hopkins University Press, 1990. 383 p.

Towle, Philip. *Pundits and Patriots: Lessons from the Gulf War*. London, Institute for European Defence and Strategic Studies, 1991. 52 p. (Occasional Paper No. 50)

Verification to the Year 2000. By Sidney Graybeal *and others*. Ottawa, The Arms Control and Disarmament Division, External Affairs and International Trade Canada, 1991. 56 p. (Arms Control Verification Studies No. 4)

Waters, Gary. *The Architect of Victory: Air Campaigns for Australia*. Canberra, Australia, Strategic and Defence Studies Centre, Australian National University, 1991. 223 p. (Canberra Papers on Strategy and Defence No. 74)

Wicker, Brian. *Chemical Weapons: Are British Reservations Still Justified?* London, Council for Arms Control, 1991. 30 p. (Faraday Discussion Paper No. 17)

Other Recent United Nations Publications on Disarmament

Department for Disarmament Affairs

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Towards a Nuclear-Weapon-Free Zone in the Middle East
(Sales No. E:91.IX.3)
Verification and the United Nations: The Role of the Organization in Verification of Multilateral Arms Limitation and Disarmament Agreements
(Sales No. E.91.IX.9)

Study*

South Africa's Nuclear-Tipped Ballistic Missile Capability
(Sales No. E:91.IX.15)

Topical Papers

Number 6: Confidence-building Measures in the Asia-Pacific Region (Sales No. E:91.IX.16)
Number 7: Confidence- and Security-building Measures: From Europe to Other Regions (Sales No. E.91.IX.17)

Disarmament Facts*

Number 77: *Nuclear Weapons: Summary of a United Nations Study*
Number 78: *The United Nations and Disarmament since 1945*

* Also available in Arabic, Chinese, French, Russian and Spanish.

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United Nations Institute for Disarmament Research

Research Reports
Verification of Current Disarmament and Arms Limitation Agreements: Ways, Means and Practices, by Serge Sur (ed.), published for UNIDIR by Dartmouth (London), 1991/*La vérification des accords sur le désarmement et la limitation des armements: moyens, méthodes et pratiques*, 1991, 406 p. (numéro de vente: G.V.F.91.0.9)
The United Nations, Disarmament and Security: Evolution and Prospects, by Jayantha Dhanapala (ed.), 1991, 156 p., United Nations publications, Sales No. G.V.E.91.0.13, forthcoming
Disarmament Agreements and Negotiations: The Economic Dimension, by Serge Sur (ed.), published for UNIDIR by Dartmouth (London), 1991, forthcoming/*Dimensions économiques des négociations et accords sur le désarmement*, par Serge Sur (éd.), 1991, 211 p. (numéro de vente: G.V.F.91.0.18), forthcoming
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Economic Adjustment after the Cold War: Strategies for Conversion, by Michael Renner, published for UNIDIR by Dartmouth (London), 1991, 262 p., forthcoming

** Also available in French, Russian and Spanish.

Research Papers

No.10—*Disarmament, Environment, and Development and Their Relevance to the Least Developed Countries*, by Arthur H. Westing, October 1991, 108 p. (Sales No. G.V.E.91.0.19), forthcoming

UNIDIR Newsletter

Vol. 4, No. 3, September/septembre 1991, *Naval and Maritime Issues/Questions navales et maritimes*

Vol. 4, No. 4, December/décembre 1991, *Bilateral (US-USSR) Agreements and Negotiations/Accords et négociations bilatéraux (EU-URSS)*, forthcoming

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United Nations sales publications may be obtained from bookstores and distributors throughout the world or by writing to: United Nations, Sales Section, New York or Geneva. Non-sales publications may be obtained by writing to the Department for Disarmament Affairs, United Nations, New York.

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Documentation Relating to Disarmament
Resolution 271 (XII), adopted by the Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean at its twelfth regular session, entitled "Foz de Iguazú Declaration on the joint nuclear policy of Argentina and Brazil", Mexico City, 9 May 1991

Agreement between the Government of Hungary and the Government of Romania on the Establishment of an Open Skies Regime, Bucharest, 11 May 1991

Excerpt on Nuclear Disarmament and Non-Proliferation from the French Arms Control and Disarmament Plan, 3 June 1991

Final Document of the Seminar for High-Level Military and Civilian Officials, Yaoundé, 21 June 1991

Statement by President F.W. de Klerk on South African Accession to the NPT, Pretoria, 27 June 1991

European Council Declaration on Non-Proliferation and Arms Exports, 29 June 1991

Communiqué of the Political Consultative Committee of the Warsaw Treaty Member States and Protocol Signed, Prague, 1 July 1991

Communiqué from Paris Meeting of Five on Arms Transfers and Non-Proliferation, Paris, 8-9 July 1991

Economic Summit Declaration on Conventional Arms Transfers and NBC Non-Proliferation, London, 15-17 July 1991

Democratic People's Republic of Korea and the International Atomic Energy Agency Secretariat Complete Safeguards Agreement Text, 16 July 1991

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The Next Step: A Biological Verification Régime
Barbara Hatch Rosenberg

The State of the Biological Weapons Convention
Barend ter Haar

Documentation Relating to Disarmament
Statement of the Member States of the Warsaw Treaty, Budapest, 25 February 1991

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